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Cucamonga Vineyard Co., et al, plaintiff

In the Superior Court

OF THE

COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

DEPARTMENT ONE

Cucamonga Vineyard Company, et al.,

Plaintiffs

vs.

No. Vol. 8.

San Antonio Water Company, et al.,

Defendants

HON. FRANK F. OSTER, Judge.
I. BENJAMIN, Official Reporter.

COUNSEL APPEARING:

For Plaintiff

For Defendant

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v.8

Gift
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IN THE

Superior Court

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State of California

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I. BENJAMIN, Official Reporter

Wednesday, April 14, 1909. Fifty-Second Day.

F. C. FINKLE.

Re-Direct Examination.

Mr. McKinley: Q You have made a diagram illustrating the condition of the old and new alluviums and showing the geological conditions about the Red Hill?

A I have.

Q Put it on the board, if you please.

A I want to apologize for the draughting work, as it was made with pencil in a poor light and in somewhat of a haste. The title of the diagram is Geologic section northerly and southerly through well no. 7 from foot hills to Red Hill. Horizontal scale, 1000 feet per inch. Vertical scale, 100 feet per inch. Legend, blue represents water bearing formation; yellow represents clay and fine silt; red represents still water champlain deposit; lighter coloring above plane of saturation. As the horizontal scale is only 1/10 of the vertical scale, the diagram is distrorted in the horizontal and vertical line 10 times. If it had been made on the same vertical scale as it is, and the horizontal scale xx equal to that, xx it would have been ten times as long as it is. The effect of that is to sharpen all of the angles 10 times. And in interpreting the diagram that must be considered. Those angles and dips are all 1/10 of what is shown. Beginning on the left hand side of the diagram is the foundation of all the older formations, the metamorphic rock of the Sierra Madre Mountains, which I designate as surface bed rockx in the upper left hand corner of the diagram, and the names of those rocks given.

Below that is the other formation which is probably the pleocene or older uplifted rocks which were formed when the first uplift of the old terrene occurred and before the ancient alluvium or early quaternary. A bove that is the earlier quaternary or pleistocene which is indicated by the yellow in clay and silt with the blue veins or old channels running through it. I wish to be understood that those blue veins are only hypothetical as to their size and location; that they are irregular in size, being some of them possibly 100 to 200 feet wide, and that their height varies, depending on the depth of the porous deposits during cycles of heavy flow, and that the lines as drawn are merely to indicate that there are old channels, but not in that exact form.

In this ancient formation of early quaternary or pleistocene I have indicated the opening of the pores in the upper part of the anticline of the Red Hill by drawing light blue lines across showing where the escape of waters due to uplift pressure and lesser density on the apex would cause springs on the Red Hill. I have also shown where the opening of pores in the outside of the curve in the lower synclinal might cause those to be saturated by waters transversely, but which waters could not flow out on account of the bed-rock against which it is held. I have also shown the probable fact that there is water contact between the pleistocene and the pleocene by a heavy blue line, and which water, imprisoned at the time of the uplift, undoubtedly played a part in uplifting the Red Hills to a sharper point, as we find it along the line of the seam. Then on top of the Red

hill anticlinal I have designated the dotted green lines which are lettered denuded part of former Red Hill. That is, the Red Hill has been raised higher than it now is and a portion of it has been washed away by local rainfall falling on it, cutting gulches such as we can see on the south side of the Red Hill from the railroad. Then above that, at the change of level which occurred by the champlain subsidence, is indicated in red "champlain or still water deposit" which is probably entirely denuded on the summit of the Red Hill, but extends down on both sides of the fold. In the bottom or synclinal between the Red Hill and the uplifted strata of the mountains, is the ~~xxx~~ late quaternary or recent formation. And I will state that in describing these two formations I am going into the full subdivision instead of doing as Mr. Trask and Mr. Mendenhall did, classifying the champlain and pleistocene together and calling them ancient alluvium. Some geologists follow that practice, but I never have. I have always regarded the champlain as distinct and have classified it as the middle quaternary. Above the champlain we find those formations of very coarse detritus which are much coarser near the mountains, with more of the blue or water bearing formation and less of the clay, and much finer down at well no. 7. This profile has been drawn at well no. 7 and the strata shown are approximately as disclosed by that well. Where the well is located the preponderance of clay in that vicinity is explained as I have already stated by the angle formed in the basin and the conditions at that point which was deposited with silts extensively and lesser deposits of sand and gravel.

While these clay and silt deposits were forming in the eddies a portion of the denuded material from the upper part of the Red Hill would also gravitate down and mingle with them and no doubt composed a part of the clays which are found in the formation near the Haskell wells. The material which was denuded from the top of the Red Hill anticline and deposited in this manner I classify as recent material. In fact, any material which has been moved during the recent quaternary should be classified as recent material, including that as well as any material which may have been eroded from the upper end of the strata; because you can't classify anything as early quaternary or pleistocene unless it lays in the beds just as it has been laid down. If it has been again moved it belongs to the next geological period, the same as the pleistocene having been moved from the higher mountains xxx xxxxxx where they were metamorphic, has become pleistocene by reason of having been deposited during that age in geology, and not because of its origin. And taking the plane of saturation, I have indicated that by a blue line marked "plane of saturation# in recent gravel formation." That line, while it is a variable one, depending on the season, I have placed at a point which may correspond somewhat approximately with the conditions to-day. That would fall and rise, depending on the amount of water supplied above.

The Court: I notice that you indicate that by an irregular curved line. Is it your idea in so doing that that represents the plane as influenced by successive seasons of rainfall?

A I haven't had any especial design in locating that line, as we have no borings above well no. 7, and I have merely

drawn a hypothetical design. I have no doubt that it had waves in it owing to the density of the formation varying; but where they are and what they are, I have no means of knowing. The only idea that I intended to convey is that it slopes generally from the northerly to the southerly. Returning to the older formation, I have indicated a plane of pressure in the old alluvium (meaning by old alluvium only the pleistocene) and that plane of pressure is where the formation is completely saturated, and may vary with different years. It may rise some years and fall in others. And when it rises and falls it influences the discharge of the Cucamonga Springs because that is the head that feeds the flow of the Cucamonga Springs. Above the plane of saturation in the recent gravels as well as the plane of depression in the older alluvium is a zone of unsaturated material which I have shown in a lighter blue, from the fact that while it contains water at times percolating down through it toward the permanent plane of saturation, it is not saturated and may not contain even more than 25 per cent. of the water which it would hold in a state of saturation, and the maximum which it would contain not being saturated would be 75 per cent. of the full quantity. I have also indicated a surface stream flowing from A to B over the recent deposit and indicated by broken dashes, the hypothetical course of percolation being through that non-saturated mass down to the plane of saturation. And the time consumed in feeding the plane of saturation in both formations is for that water to pass which is to supply the area, and percolate against the resistance through the formation,

without any assistance from pressure. Pressure does not begin till we strike the permanent plane of saturation. I have also indicated hypothetical foot hill tunnels, such as the Franjich & Stone tunnel and the San Antonio Tunnel and the Loamosa Tunnel and others of that character, which, driven into the xxxx xxxxx formation near the foot hills, would rob both the ancient and the recent alluviums by depleting the water itself on its way to feed the two alluviums. And the nearer the foot hills, the more it would rob the ancient alluvium, and interfere with the Cucamonga Springs. The section at the lower end is not complete, as the paper was not sufficiently long to do so, and I have ~~put~~ cut it off by disconnecting the strata and have marked that "part of section below here but complete above to the surface of ground.x" Now as to the portion marked probable pleocene or other folded rocks, we have no borings to determine what those rocks are; but reasoning from analogy by the pleocene formation on the Chino Ranch which has been uplifted there, as well as at Fullerton and below Rincon, we assume that the first strata applies to the pleocene which is the age in geology just preceding the pleistocene, and that these formations may extend in a series down to and including the cretaceous, as we know that San Gorgonio Peak and San Jacinto mountains are the oldest mountains in this section, and originated in the late part of the triassic or early part of the cretaceous, and that there are cretaceous deposits in the Temescal Mountains and mouth of Mill Creek; so that that may be complete down to a portion of the cretaceous where it would be interrupted,

as there would be no older mountains to supply the marine deposits. Below the pleistocene, unquestionably, all the rocks are of marine origin. That is, the country was then under sea water and under sea level, and that is determined by fossils and shells which are found in the oil bearing formations in the Chino Ranch, Fullerton and other places, and in that respect they differ from the quaternary deposits above that which were formed in still water or lake conditions.

Below the Red Hill is shown the dip on the south side of the anticlinal of the Red Hill, the water plane falling rapidly there, and the blue line marked "plane of saturation below Red Hill." That water plane is shown by the Jordan well being dry, the Riche well being deep and striking water at a very great depth, and other wells in Ontario and elsewhere as well as south of that Red Hill dike, striking water at great depths, shows that that water plane is not related to the water in the pliocene veins, nor is it related to the water plane in the recent, which is backed up and held up by the dike of the fold, but is influenced by the travel of the water around the Red Hill to the southwest and is fed merely by the percolating waters which escape from the outlet of the basin above the Red Hills, and which are only sufficient to saturate that formation up to the hypothetical line which I have shown. All of that formation above the red champlain deposit is recent and belongs to the late quaternary.

The Court: Is it your theory that the Cucamonga Springs

and Lone Star developments come out of that later formation?

A No; they come out of the earlier formation at the xxxxx apex of the Red Hill where I have shown these veins turning over, the bending of that formation having made fissures and the denudations having removed the covering to permit them to escape. This is the apex of the Red Hill and the cut in which the Cucamonga Springs appear, and the Y Tunnel is still deeper; and by xxxxxxxxx removing the pressure or resistance on top of these veins they escape, the same as they would by boring a hole in a pipe line at that point.

The Court: Suppose you locate the Cucamonga Springs there theoretically.

A I have written here "Cucamonga Springs", at a point where a cut through the Cucamonga Red Hill, would intercept some of those veins of water, and at that point the water may be coming from several of those veins, as I have indicated, by upward pressure, the faint blue lines, tending towards the formation of the Cucamonga Springs.

Now, there is one furtherpoint I wish to explain - -

Mr McKinley, Q With regard to the location of the Cucamonga Springs, now indicate the Cucamonga Water Company's developments and so on; where are they?

A Well, they are on some of those veins which come from a more easterly direction, and above the Springs, so that if you divert water out of these veins you would diminish the Springs.

The Court, Q This is a vertical cross section?

A It is a longitudinal cross section from the mountains through the Red Hill.

Mr Britt, Q And the Cucamonga Springs?

A Well, the Cucamonga Springs would be pretty close to this line; I did not aim to make the line to strike the Cucamonga Springs, under the main part of the hill there.

The Court, Q In other words the delineation on your theoretical diagram would include all of the surface developments to below the Red Hill?

A It would include the Y tunnel and the Cucamonga Springs, the Y tunnel havwing been cut into that same cienega formation which feeds the Cucamonga Springs.

Q Then the Sadie tunnel and Stowell wells, would be this side of the top of that section?

A They would be on a more westerly section; we would have to make another section to show that neighborhood through well number 3; if you made that section you would find a difference just immediately north of the Red Hills, and you would find coarse gravels and sands instead of the clay deposits, which we find at well number 7; for the reason that well number 3 is near the main trend of the channel, and there the recent deposits would be coarse, whereas in this corner or eddy at well number 7 they would be fine.

Q Now, as to well number 7, it has exhibited some characteristics very different from wells 1 to 5, namely, the temperature of the water being some eight degrees higher.

Mr Britt, Q What evidence is there of that?

Mr McKinley: Mr Stowell testified to that.

A I took the temperature there myself, and that has been testified to by Mr Stowell, and Mr Britt read it into the record from Mr Mendenhall's report in cross examining Mr Trask; that water being in a qiescent state at that point, and in that dense material, not moving, would naturally acquite by long rest the earth temperature, which increases rapidly as you extend below the surface; some authorities claiming that it increases at the rate of one degree for ever 50 feet and some one degree for every 60 feet; but as a matter of fact that depends on the state of the consolidation of the material; if the materials are fine and well consolidated, the earth temperature would increase even more than one degree in 50 feet; the same may be true in that old formation, the material being more solid, and water at rest in that material would acquire a high temperature, ow

I BENJAMIN
OFFICIAL REPORTER
SUPERIOR COURT

ing to the downward increase of temperature.

The Court, Q Have you made any observations of the temperature of the water in the Gage tunnel and the Springs?

A I have not testified to any, only in a general way, and Mr Stowell testified to some of them; I have not been asked about them; I merely wished to call attention to the Haskell well as that appeared in the record as being of a higher temperature than those on the west side, wells 1 to 5, and I merely state this to explain the phenomenon.

Mr McKinley, Q What if any draft is made upon the waters flowing to the gravel bed, by the taking out of water from the old alluvium?

A If you take that water from the old alluvium down here there would be no effect on the amount of water which would reach the recent gravel bed, unless the plane of saturation or plane of pressure in the old alluvium should rise above the separating deposit of the Champlain period; if the pressure is higher than that, and you draw from the old alluvium you would deplete the recent, but as my diagram shows it, the line of pressure belong below the point of separation, drawing from the old alluvium can't deplete the upper, because it could effect no pull on that water, which is not in contact or pressing on the water in those old veins; now, the same would be true about drawing from the recent alluvium; if you pump at well number 7, or wells 1 to 5, you could not affect the water in the ancient alluvium, because they are not under pressure where they are together; it would be equivalent to taking a flume running down on the surface, the water not being under pressure, and diverting

water at some lower point would not diminish the discharge to another branch from the flume at an upper point.

Now, I have not indicated these veins as being so continuous and solid towards the higher parts of the ancient alluvium, back of the separating diaphragm as I have below, for the reason that in forming that deposit materials of such a coarse nature were laid down near the mountain that those veins would not be very perfect; whereas, lower down in the valley where the fine material would settle more freely, the veins would be made more and more perfect as you go down. The point is that unless these materials are fully saturated up to the top, the effect of drawing from these veins would not influence anything above it, nor would the effect of drawing from the late quarternary in the reservoir, influence the supply going to the veins, as they are governed by a different law entirely, having no relation to the draft which may be made at lower points. Now, the only possibility of contact of water between the ancient and the recent alluvium, after they are in a state of saturation of pressure, would be in these channels at the Cucamonga Springs, where I have marked "Cucamonga Springs". If the flood water should flow on the surface all the way down instead of to point B, it would saturate that thin layer of recent gravels there, and form a small plane of saturation, not a part of the general plane of saturation above, and while the springs are escaping in that channel, they would ofcourse mingle with the waters in that recent formation, and that was a matter to which Mr Waters directed my attention here the other day on the witness stand.

The Court, Q You have said that this cross section is not far enough to the west to intersect the Sadie tunnel, but if I understand your theory correctly, assuming this was far enough to the westward the Sadie tunnel would start in the new and extend into the ancient formation?

A No, it would start in the ancient, in the Champlain formation, and pass through the peistocene, and finally into the new, but the wells which supply the Sadie tunnel are all bored into the old formation, and are in the same formation as the Cucamonga Springs, and belong to the same geological age, only they are supplied from different veins, or old channels, leading from the mountains.

Mr McKinley, Q With reference to Stowell well number 4, did you notice the height to which that water raised?

A That rose above the surface of the ground.

Q How much above the surface of the ground did it rise?

A I have seen it flowing over a pipe four feet above the surface of the ground where the well was sunk, and quite a considerable flow of water coming from it.

Q Now, referring to these veins or ducts, as the counsel examining you have called them, as to size and shape, have they any resemblance to pipes or pipe lines or anything of that sort?

A They have no resemblance to pipe lines, except from the fact that they are enclosed; they would vary in width, and they might be in places only 20 feet or less in width, and in other places 100 feet or more, depending on how wide the coarse gravels were laid down when the streams ran there. They are very irregular, and the only thing that makes them

comparable to a pipe line is the fact that they are enclosed in silts, which prevents the water from escaping and puts the water under pressure.

Mr McKinley: We offer this diagram in evidence and ask that it be marked Defendants' Exhibit Z16.

Diagram admitted in evidence, marked
DEFENDANTS' EXHIBIT Z16,
being geologic section from mountains to Red Hills.

Recross Examination.

Mr Britt, Q You spoke about that Stowell well number 4, which you saw flowing over a pipe, which stood four feet above the top of the ground; did you also see that when the pipe was ten feet above the top of the ground, and the water did not flow at all?

A I never saw that whenthe pipe was 10 feet above the surface; the only time I saw that was when there was some three or four feet of pipe there and the water flowing over it.

Q Were you ever there when the well was not flowing over the top of the pipe?

A That was the only time I saw the well before it was cut into the tunnel, on the first gallery, and siphoned.

Q You don't know then that the highest limit of the flow of that water was 10 feet above the ground, the surface of the earth?

A No, I don't know; that would be somewhere, and wherever that is, it would be where the friction would neutralize the higher elevation of the head above.

Q In the next place, I understand from your statement here that the scale of this map Z16,- I don't see a statement of

the scale.

A Yes, sir; it is on the title, not the map but the geologic section 216; horizontal scale 1000 feet per inch.

Q All right; vertical scale 100 feet per inch.

Q And I observe that according to that scale that you have the well number 7 located about 6000 feet from the Cucamonga Springs: The fact is it is only about 1000 feet isn't it?

A Well number 7 is 1200 feet above the upper end of the Y tunnel, but the Cucamonga Springs are much lower down.

Q They are in the channel directly west are they not, from the Y tunnel?

A Well, the whole region there, is implied by the Cucamonga Springs, and it depends on where you take it.

Q Well, take it anywhere, you have your well number 7 located about three times as far away from the springs as it should be, haven't you?

A I did not attempt to locatethe well exactly, on this, but I don't know as to exactly how far it would; it depends on theplace you take for the Springs, to measure from.

Q Put your scale on this, and tell us how far it is according to this scale of this map?

A That would be about 6000 feet, between 5000 and 6000 feet above where the Springs are marked.

Q Isn't it over 6000 feet? There you have "Cucamonga Springs" and you have six of these squares.

A The well is located in the sixth square.

Q And here is the well, and the Springs are located in the seventh square from there,are they not?

A Well, that depends on what point you take.

Q Well, the location according to this diagram is about 6000 feet, isn't it

A From thepoint where the letter "C" is written, yes.

Q Now, then I will ask you to take one of these maps, and find the well number 7 and the Y tunnel -

A I think we hadbetter take another map which shows a larger scale; that would measure about 4000 feet down to where the Cucamonga Springs are indicated, on Exhibit C.

Q What would that be? The head of the 10 inch pipe line?

A No, that is where the cienega conditions arein evidence; the headof the pipe line is not shown, but it says water and cienega conditions in the channel.

Q Well, that is pretty near the head of the cement pipe line?

A Well, that is the point I was referring to as the Cucamonga Springs, where the pipe line takes it out.

Q The Cucamonga Springs extend up for nearly a half a mile from there?

A Yes, sir; that is why I say the distance from well number 7 will depend on the point you take to measure from.

Q You have a difference of about 2000 feet in the distance there?

A You must understand this section is taken on an angle; that is a section drawn from the mouth of Cucamonga Canyon southerly; drawing it on an angle, or rather taking this distanceon an angle lengthens the line; I don't believe it is very far off when that angle is taken into consideration; I did not attempt to be extremely accurate in locating well number 7,

as I made it hurriedly last evening; I don't think there will be more than five or six hundred feet difference on that angle.

Q That is in the vicinity of the head of the 30 inch pipe line, which is below the entire district called the Cucamonga Springs.

A Yes, that is where I attempted to write the words "Cucamonga Springs".

Q The Y tunnel is in the cienega which formed the Cucamonga Springs?

A That is true.

Q Then the Cucamonga Springs region begins about 1200 feet from your number 7 well?

A It does, Mr Pritt; but I wrote the word Cucamonga Springs, at the lower end, and I don't think you have a right to assume that I wrote it at the Y tunnel.

Q What I am objecting to is your well number 7 here on your plat or chart so far remote from the manifestation of water called Cucamonga Springs on this plat.

A You need not worry about that; it is on ~~angle~~ an angle, and that is about the difference of 500 or 600 feet, and about as near right as I can well do it without accurately measuring it.

Q Your own statement shows it is about five times as far as it should be; it is 1200 feet and the section shows it 6000 feet.

A Oh no, I don't think so; and this being on a slanting course would lengthen the distance here.

Mr Waters: You can't get a slant between the wells and

the springs; those are two fixed points.

Mr Britt, Q When you come to illustrate your theories, you ought to be fair in the location of points that are known.

A Well, I mean to let the maps in the case govern the distances and not that; I am not attempting to change any distances in this case by this section.

Mr Britt: The Court will no doubt experience some degree of relief when it is said that it is not my purpose to protract this geological discussion beyond a few questions.

Mr Britt, Q Is it your view that this bowl shaped depression between the foot of the mountains and the Red Hill, concerning which you have testified, and which is depicted on this chart Exhibit Z16, was ever - that the formation which you have marked hereon the chart "Champlain formation" was without the imposition upon its surface of any of this late quaternary or recent formation?

A When the Champlain period closed the uplift began, and then the deposition of the recent or late quaternary also began, and the line of contact at the upper end would be very indistinct, while at the lower end where there has been no erosion, it would be very plain such as it was in the Sadie tunnel.

Q Was this late quaternary or recent formation laid down under water?

A It was laid down in a lake of greater or less depth, depending on the time in which it was laid down. - Oh, the late quaternary?

Q Yes, that is what I was asking about?

A No, that was not laid under still water; I thought you

referred to the Champlain.

The Court, Q Your champlain period may be characterized as a period of silting process, under fresh water?

A Yes, a period of subsidence, following the glacial period.

Mr. Britt, Q Then when the late quaternary, or recent formation, or what has more commonly been called in the progress of this case the recent alluvium began to be deposited, it was not lain down in water?

A No, it was laid down in flowing water, or in other words it is what is called a fluviatile deposit.

Q Then that recent alluvium was brought down by the action of water, as your answer implies, and deposited on top of the Champlain formation, what became of the water which brought it down, which brought down the new alluvium?

A Well, that deposit did not begin until the lake had been lifted, so that the upper part of it was drained, and that water would flow into the lower part of that lake, which remained, and wouldrain out toward the ocean, through the outlet of that lake; this uplift did not occur in a year or a day, or a thousand years; that uplift was a slow process, and the upper part of the lake was first exposed, and these recent deposits began there, and the water would run down into the portion of the lake which remained.

Q I understood you to say that there was not any lake there, that the new alluvium was not lain downunder water at all.

A That is what I said; that it was first laid down in the part of the lake that was nearest to the hills or mountains, which had been drained as the uplift began, and as the uplift continued and progressed, more and more of the lake

disappeared, and as soon as the lake disappeared then the flowing water deposits or fluviatile deposits were laid down; they could not be laid down in that part of the lake which still existed.

The Court, Q Do you mean it was laid down where the lake had been but ceased to be?

A Yes, sir; that is where it was laid down; where the lake was, and ~~were~~ the sediments that remained floated out on the lake, and added to the Champlain deposit.

Mr Britt, Q Where was the outlet of thelake?

A Into the ocean.

Q In which direction?

A That is a matter of surmise; it has been placed in a westerly or southwesterly direction, through the gaps in the hills; some geologists have placed it in one place, and others have placed it differently; there have not enough borings been made to determine the contour of the Pomona divide; it was through some low point in that Pomona Divide that itemptied in a westerly direction.

Q You think as the water came down from the mountain carrying this new alluvium with it, and descended on to the Champlain formation which was dry - you stated that was dry, a the water dropped all of its sand andgravel and took to the lakes below?

A That would be a natural result, that when water flows down a plain, on the surface, it would drop its deposit, above or at the margin of the lake, or the portion of the lake which remained. When that process began this fold was not in existence, and the fold just beginning to form, and

the uplift just beginning to form; and you must remember that that diagram represents the condition today, and not the condition at that time.

Q Well, I understood you to say that the uppermost of the old formation was dry land, at the time your new alluvium began to be lain down?

A Precisely; that is, the uplift had progressed to a point where some of the lake had been rendered dry by it, and the higher you would elevate that bowl the shallower it would be, and as that process of uplifting went on, the shallower and shallower it became, and greater andgreater areas were exposed, which werethen progressively filled with the recent detritus.

Q Well, you think all that portion of the lake which lay to the east then was dry do you, when they began to be lain down?

A What do you mean by lay to the east?

Q Well, you have a basin formed there - -

A Oh, I understand you now; no; the dryness or drying of the lake would be in on the north, because the mountain range was going upward, and would lift with it that part of the lake which was nearest to the foothills, and it would also be lifted some near the Red Hills.

Q Do you mean it was the uplift that made the water run out?

A Yes; the uplift was along two lines; one was along the main mountain range, which was lifted up gradually, and the other along the line of the Red Hills, which was also lifted up contemporaneously with it, and gradually, and the portion of the lake which first became dry was near the

mountains, because that Red Hill and uplift being lower originally, had to appearlater; and finally the uplift continued until the entire lake was completely drained, but that took a long cycle of time.

Q Well, then, the Cucamonga Canyon or depression, which in ancient geological times was the fore-runner of the present Cucamonga Canyon, furnished the detritus which was brought down toward this basin, or upon this Champlain formation, and it just followed up the receding waters of the lake, did it?

A That is true, until the lake was entirely dry, and then it continued to deposit on top of the material already covering the bottom of the lake.

Q Would it send any of that deposit, in the direction of the eastern extension of the lake?

A It would by changing its course on the debris cone, as shown on Exhibit F by the swing of the arc, as there would be a cone built up, at the mouth of the canyon, and that would cause thestream to change its direction to the east and to the west; and the other canyons were operating at the same time, the Deer, Day, and San Antonio Canyons were filling along the foothills at the same time.

Q And so at the foot of each ravine or canyon from the mountains there was a fan?

A A fan would be formed at the margin of the lake, where it had become dry. Q. And between those fans there would be a zone in which there was an intermingling of thedeposits, from the several canyons.

A That is true; and the deposits also which came down

between the canyons, because, while there are no large watercourses between these canyons, the deposits would all the time be gravitating down, from the side of the hills and mountains.

Q Where those fans met together, the finer material would be deposited wouldn't it?

A That would in many places form lozenges.

Q When one canyon would shift to the extreme side of its arc, it would deposit coarse material there? The coarse material is deposited near the mountains and the finer further out on the plain?

A You are speaking of near the mountains now?

Q I am speaking of the gradualdevelopment of the fan.

A Well, near the mountains is where it first developed.

Q There would be formed between the several canyons regions of finer material, would there not, than there is immediately along the course of the stream which is building the fan as it spread at right angles from the mountain, generally?

A That would be true, until the stream would shift over into that region, from the fan building up so high, that it would be running on a ridge, and finally it would take a course laterally toward that region.

Q That process we see going on at the present time?

A You see it going on at the present time.

Q I am not claiming that this discussion as to fans has any especial connection with the chart Z16.

Now, in regard to these veins or ducts, which permeated through the older formation, marked here on this chart the early quaternary, or pleistocene, you seem to have indicated

them with the same degree of frequency, throughout the deposit.

A Well, that is purely hypothetical; I don't knowwhere they are located; and as I explained, those veins are only drawn hypothetically, and not in a manner which indicates their depth or width, nor where they are placed.

Q Have you any reason to believe that those veins are not lain down, substantially as you have depicted them here on your chart?

A No, I don't know how they are laid down; that would be too complex a problem to discuss, as we don't know how they are laid down.

Q All right; that is sufficient for that: Then do you think that the veins are approximately as numerous in the lower part of your old formation, early quaternary, or pleistocine as it is called on this chart, as they are in the upperportions?

A I suppose that in the very lower part of the formation, the veins would be less frequent, on account of the seamud which extensively covered the mountain range when it was new; if there is any difference, they would be more numerous in the upper part, but having no knowledge on the distribution of the veins, I simply drew them in hypothetically, without intending to show how numerous they were or where they werelocated.

Q You have that laid down on the pliocene or the older folded rocks: Where does the seamud come in?

A The pliocene rocks were formed under sea-level, with marine deposits - they are the formation in which we obtain

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oil, sandstone and shale, and the old mountain range above was also under sea-level, and while some of those fine sediments were off the older mountains, when they uplifted, the first material that eroded was that fine material.

Q You are speaking of mud that consolidated into shales and sandstones?

A Yes, sir; I am speaking of those muds which had deposited in the tertiary period, and the coarser strata were in the form of fine sands, because they were deposited in the sea, and the finer strata were fine impalpable sediments, which formed the shale strata, and by reason of the long repose under sea-level and the pressure of the water above, they became compacted, and formed the structure of sandstone and shale as seen in the Coast Range and Chino Hills.

Q Have you in this old alluvium depicted on this map, any shales and sandstones?

A No; those old alluviums were deposited in running water; those that you refer to are what we know as marine deposits.

Q Why should your ducts or veins be any less numerous, in the lower part of your old alluvium than in the upper part?

A Well, you seemx to overlook the point that when the range was first uplifted, in the latter part of the pliocene, that the whole uplifted surface, was covered with this fine mud, which had been deposited while the mountains were under sea-level, and that that had to erode first, before you could begin to obtain erosions from the coarse rocks underneath; this sheet of pliocene extended much further up than I have shown it, originally, and was the first part to erode, and the first of the early quaternary obtained its deposit

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principally from that, and not from the metamorphic rocks, from what we would call the sea sands and sea muds, more or less consolidated; finally the mountains were stripped of that; when they were, then the coarser material would begin to come.

Q Well, then it would necessarily follow that the shales were on the red fill?

A I think not; when you take shale and pulverize it you make clay out of it, and when you take sandstone and pulverize it you make fine silts with some coarser grains of sand in it, and that would form the clay, and the silts and the sands, which would undoubtedly constitute the first deposit of the pleistocene.

Q I asked you if you had any shales or sandstones in these old alluviums and you said no.

A You seem to misunderstand the geological expression entirely; when we speak of shales and sandstones we mean them in their original beds; the by-product or after-product of those would be clays; you can take shale and make clay out of it, and if you pulverize sandstone in water, it will settle into layers of coarse and fine sand and silt; the old alluvium is merely a secondary product of the older rocks, and those older rocks consist of the pliocene and the Jurassic, rocks in the mountains.

Q What has that to do with the greater or less frequency of these hypothetical veins and casts, in the lower part of this old alluvium, as compared to the upper?

A It has this to do with it: That the mountains when they were under sea-level were covered with the fine sediments,

which make up the shales and sandstones, having been under the sea; those sediments would settle on them, from the erosions of higher mountains in other parts of the Continent; when they were uplifted, the first material which had to be stripped off, would be those muds and fine silts; while they were coming down, which formed the lower part of the pleistocene, you couldn't have very many ducts through them, because there was no coarse material to make ducts from; but when the mountain range had been denuded of that material, and you had gotten down to what is now in evidence there, namely the coarse granitic rocks, your ducts would begin to form more numerously, and it is that which has caused the ducts to be formed principally in the upper part of the old formation.

Q That being so, why did you indicate on your chart here, the prevalence of your supposed ducts, with equal frequency throughout the old formation?

A Just as I stated, in putting those where they were, I drew a few lines through there to indicate the general courseof the ducts, and had no intention of indicating how many there were or where they were, nor how thick they were, nor anything about them, except that in a general way they passed through the ancient alluvium.

Q And that was because you didn't know where they were?

A Precisely; because we don't knowwhere they were

Q Will you indicate on this chart, about the place in the older alluvium about where you think the formation of the ducts began?

A I will refuse to do that because I don't want to guess

at anything I don't know; I don't know how much of that fine material went down before those fine ducts formed at all; I can't do it.

Q So you are unable to state in what thickness of the old material, the old alluvium, there should be assigned a section, in which these so-called ducts are found to circulate?

A I am unable to do that; and particularly if you refer to those being ducts sufficiently open to carry water; it is true no doubt that the lower part varies in density, some parts may be a little more open than others, but they are all very fine, because the products which made them were from fine rocks and fine sediments.

Q Then you have indicated here - put your ruler on this - your guage - from this point on which I lay my pencil to the top of the strata, what is the distance to the top of the Red Hill?

A From the lower blue line?

Q Yes, sir?

A That would be 400 feet, taking that scale, to the top of the present Red Hill.

Q That is a vertical section below the top of the Red Hill as indicated on the chart?

A That is true.

Q Is it your view that those ducts or veins are found only in the upper 400 feet of your supposed old alluvium?

A No, I have no view on that, or the thickness of it; I want to say that the thickness of the old alluvium as drawn there, is only hypothetical; no one has bored through it and we don't know how deep it is; I have only given a hypothetical

thickness which may be a great deal less than it really is All we know about it is from the depth of certain wells in the old alluvium.

Q You said to Mr Haskell that it was half a mile to a mile thick.

A I stated that was the limit usually assumed; ofcourse we don't know; it may be thicker than a mile, and it may be thinner than half a mile; it is all speculation.

Q It may be only 400 feet thick?

A Well, I think there have been wells bored in it a greater depth than that. Consequently we may assume that it is thicker than that.

Q What wells?

A Several wells on the Lone Star tract and the 35 acre tract which have been bored to a greater depth than that.

Q You are assuming that those wells remain in the same formation are you?

A Well, I think the character of the log of the wells, and the general evidence is they did; and the wells in the Sadie tunnel, another group of wells in the old alluvium, which we can tell from the material which came out of them, were some of them bored to a greater depth than thay.

Q Which of the wells did you see the material come from?

A The Beck well bored in 1899, during the trial of the MacPherson case, and I think that is the well referred to by the Court yesterday, in which they had trouble with the casing.

Q What depth was that well?

A I can't tell you the depth of that well; but it is a deep

well, six or seven hundred feet.

Q Do you know what the depth is at all or are you guessing?

A I think that well is shown with its depth, with other wells, on one of the exhibits in this case, where you have all the wells on one exhibit.

Q I would like to have it pointed out.

A If you give me the exhibit I will see if I can point it out.

Q Do you know what exhibit it is?

A Plaintiffs Exhibit 33, elevations of the depths, etc. of wells.

Q Commencing at this end we have the Sourwine well - -

A Thos are in the recent alluvium; those would not cut any figure.

Q There is well number 9, what we call 14 - yes, marked 14, per plaintiffs' exhibit 1.

A That seems to be about 450 feet as shown on the exhibit; then on the left hand side are a numberof wells in the Eadie tunnel, Bottom of tunnel number 2 refers to Eadie tunnel; the deepest one seems to be 605 feet, on the 90-acre tract and belongs to the Cucamonga Water Company; No, here is a deeper one of the Ontario Power Company, northwest of the 90 acre tract, which is 705 feet in depth. I can't state what number that is; Mr Wright made those numbers and I don't know them by those numbers.

Q You would assume, taking that deepest well, that that remained in what you call the old alluvium, throughout its depth?

A I don't believe that will be disputed by anybody; I am

assuming that, yes.

Q How much deeper do you estimate that old alluvium to be; I thought you fixed it between half a mile and a mile, but I see you are not inclined to abide by that.

A What I testified to was that on the angle of exposure at the mouth of the canyon, that it might vary from a half a mile to a mile; ofcourse when you take the depth, it depends on what angle of tilt you take the depth on; you might obtain a much greater depth at one point than another owing to the angle; if you penetrate at right angles to the way it was laid down you would obtain one depth, and if you penetrate it where it was dipping on a slant, you would obtain another depth.

Q Do you know the angle on which it is dipping?

A I do not; I suppose it varies at different points.

Q Have you any approximation to it?

A I have not, I think that varies also over wide limits.

Q Do you think that that deposit is thicker next to the mountains thanit is down in the valley?

A I do, for several reasons: first, that the bulk of the material eroded, usually deposits near the mountains, and also the angle which is nearest to the line of uplift, is the sharper angle, so that undoubtedly that is thicker near the mountains than it is further down the valley.

Q Then where the upturned strata are laid out, which you mentioned as prepared to receive the water coming xxom downfrom the mountains, the oldalluvium is thicker than at the Red Hills?

A I think so.

Q How much?

A That I don't know.

Q Twice or three times?

A I can't fix any proportions; there has been no boring made to determine it.

Q You haven't any idea what the relation is?

A No, I fixed some limits the other day, which would probably be the limits; but any nearer than that I can't go.

Q Now, then you have indicated on your chart here, a distance of at any rate 400 feet, where these veins are found: Do you think they are found at any greater depth?

A My reason for placing that on the chart, was that the well number 4, the Stowell well, would indicate they were about that deep at thexlower end.

Q Do you think they are found at any greater depth?

A There is some evidence, not direct evidence of my own observation, there is some evidence that they have been found at greater depths, relating to the deeper wells in the old alluvium, which developed water at a deeper point than that.

Q Are you able to say to what depth they probably do descend?

A I cannot, because the log of that deep well of the Cucamonga Water Company and the Ontario Power Company on the Eadie tunnel, is not in evidence, and without having that log I could not form an opinion.

Q Well, take the inferior limit, where the red alluvium joins the mountains, and lays against the mountain range, where you think it was a half a mile to a mile in thickness.

Mr Surr; I think he said that the line GH was a half a mile to a mile from the mountains.

A I testified that the exposure on that angle might be from half a mile to a mile; now I don't know the thickness, and I am assuming a thickness which would give an exposure of a half a mile to a mile on that angle.

Q And you said you don't know what theangle is.

A I say I don't know, but I say that has the sharpest angle of any part of the deposit, and the probabilities are that those are reasonable limits within which to fix it; that does not mean that the strata at right angles to the strike in the manner in which they were laid down would be that thickness, because the angle influences that; you can easily see that by looking at the geologic section,- you can see what a difference it makes.

Q What I want to get is the thickness of the old alluvium in which the veins ramify.

A You will have to obtain that from some other witness for I don't know the thickness.

Q Well, then, you don't know through what depth of the old alluvium the water is flowing through conduits that you have called ducts and veins?

A I do not.

Q Do you think it is as much as 700 or 800 feet at any rate?

A Well, I have no knowledge personally of any greater depth than 400 feet, but there have been wells bored deeper than that; if we had the logs of those wells we might find it was deeper; I have not seen the logs of those wells and I don't know.

Q. Do you think it goes down any further,- that the vein bearing portion, the vein or duct permeated portion of that older alluvium has much greater depth than any of these wells have penetrated?

A. Well, it probably has, but I can't state positively whether it has or not; if it is deeper, which I think the probabilities are that it is, I wouldn't want to say how much deeper; I have no way of telling without making borings.

Q. You think it is probably deeper but you don't know how much?

A. We can't tell geologically the depth, without boring there, or seeing them uplifted and measured.

Q. Have you any reason assignable why the veins and ducts should be in a zone 400 or 500 feet in thickness, rather than a zone 3000 feet or 4000 feet in thickness, other than that in your opinion the wells which have been put down have penetrated such veins, have penetrated such veins xmxax at a depth of 400 feet or thereabouts, and have not penetrated to a depth of 3000 or 4000 feet?

A. Yes, sir; I have other reasons.

Q. What are they?

A. Because when the Sierra range was uplifted, it was covered with fine sediments and sea-muds, or shales and sandstones, belonging to the pliocene or miocene, and while those were being eroded there wouldn't be any probability of ducts forming, and that the ducts would only begin to form after the coverings had been cut through, so that there was sufficient coarse material to go down and deposit channels of coarse gravels and sands.

Q That is what you were talking about a while ago, and I ask you again if you have any idea to what extent from the bedrock below, those deposits of sea-mud formed what you call the early quaternary or pleistocene deposit?

A No, I haven't any knowledge of how thick those are.

Q You don't know whether it is a third or a fourth or a fifth or seven eighths of the whole thickness?

A I do not; I have no way of knowing.

Q Then you don't know, and you can't give any approximate notion of the extent of those upturned strata, which you talk about at the foot of the mountains, which receive the water coming down from the mountains into these ducts and veins,- whether it is 450 feet, Or whether it is 4800 feet?

A I am not giving you any closer estimate than I gave Mr Haskell; it would be more than 450 feet because on that angle the distance would be nearly double, if it were only 450 feet at the Red hill, and that would make it practically 900 feet on the angle they were tilted.

Q What distance do you think the ducts would receive the water, distance horizontally?

A Nearest to the mountains the ancient alluviums would be so finedown deep, that there would be no ducts of any value to receive water, but the further you get away from the mountain in the ancient alluvium, the more of those ducts there would be and the coarser they would be; but nevertheless water which would sink down on that upturned alluvium near the foothills would still percolate on that surface, till it would meet the first duct below there, and would then contribute to it, so that I still stick to my line of exposure,

as being somewhere between half a mile and a mile.

Q That is, you think that your veins occupy irregularly a region or zone of your ancient alluvium, half a mile to a mile in thickness?

A No, I don't think the veins would extend to the bottom of it, that is coarse veins; there might be some veins even in that dense portion, but I do believe that even if thereis not, that any water which sinks down to the part of the upturned strata where the veins do not exist, would percolate along the strata, until it would meet the first vein, and then would percolate into it.

Q Run right into it like a bee runs into its hive?

A I don't know what that expression means; it is one that I do not use in scientific parlance; it may illustrate the matter and may not.

Q The thickness of the strata which contains those veins is to you unknown?

A It is unknown to me.

Q It may be 450 or 900 feet, or twice or three or four times that amount?

A It may be; you are speaking of measurements at right angles to theformation ofcourse.

Q Well, having got into one vein, I understood from you that there is interchange of water, there is no endosmosis or exmosis between different veins?

A Between different veins in the old alluvium?

Q Yes?

A I don't think I have gone as far as that, and I think my geological sections show that thecontrary may exist

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where I have drawn the cross lines in the ancient alluvium formation, being the effect of the bending of the ancient alluvium; if you observe the lower part of the early quaternary, there are some fine lines drawn in blue, extending between various heavy lines, which indicate ducts, and those are the hypothetical pores made by the bending of the formation and at that point there may be to a certain extent, more or less limited, an interchange of water from one duct to another.

Q That would in all cases be downward?

A That would in all cases be downward, but it might put the ducts all under the same pressure of water.

Q In that case then, wouldn't it all collect in the lowest duct?

A Yes, if the capacity of the lowest duct was large enough to take all of it, and it had an outlet large enough to discharge all of it it might, but the probabilities are very much against any such assumption.

Q Well, 600 or 700 inches of water coming to the Red Hills from all of these various sources, would not require a very big duct to carry it, would it?

A It requires a pretty good sized duct in that formation with sand and boulders, on that light grade; water moves with extreme slowness through the ancient formation

Q You told us it comes down to the Cucamonga Springs quicker than to the 16th street wells.

A I said that the effect would be felt sooner there, because if you have water under pressure, the water itself does not have to travel, but if you draw out a molecule of water at

the lower end, and put in another one at the upper end your conditions are just the same, and you have drawn the water, but that identical water has not passed; it is like Mrx Haskell's illustration of the bricks; each molecule rests on the other; but that only applies when water is under pressure it does not apply in this case, until the percolating water from rainfall has reached the upper end of a duct where that duct is under pressure, and only applies after that and not before.

Q And 600 or 700 inches of water, making a strike for the Red Hill, all the way from the mouth of San Antonio Canyon to the mouth of Day Canyon, over that wide extent of country, would find great difficulty would it in finding ducts sufficient to carry it?

A It apparently would through any kind of formation, consisting of those fine ingredients, and before the Y tunnel was constructed on the east side, which helped the escape somewhat, and before the 35-acre tract and the Lone Star tunnel was constructed, the resistance was sufficient to cause cienegas to be formed there.

Q I am talking about bringing for a space of ten miles or possibly more, along the foot of the mountains.

A The longer the distance the greater the resistance.

Q If you find that the ducts are so impermeable, if you find the resistance of the materials in the ducts is so great that 700 inches of water converges to a point half a mile in width, which is about the width of the Cucamonga Springs, from points along a mountain range, ten miles or so in extent, and there is great difficulty in that quan-

tity of water reaching that point, wherein are your ducts in any way different from material through which water is percolating? What is the use of a duct or vein, or why invent ducts and veins to carry your water from these remote districts, San Antonio Canyon on the west, and the Day Canyon on the East, if they are so impervious, and the water moves through them with such extreme difficulty, that it takes four or five years for your water to reach the Cucamonga Springs, wherein do they differ from the percolating mass?

A They differ in this way: If you had nothing but clay and no porous strata, the water would not reach there at all- it would not move at all. When we speak of these veins being ducts or veins, our phraseology is entirely comparative; we mean that the clays and silts do not transmit water at all under that pressure, and that you have to have these more porous strata to transmit any water at all under that light pressure. I also desire to correct another statement: the 700 inches of supply or 704 inches does not all belong to the ancient alluvium; that the supply is even less than that to the ancient alluvium.

Q Whatever comes into the Springs you say comes from the older alluvium?

A Well, I never knew that you had 700 inches of water in the Springs at any time, even after the new tunnels were there

Q Which makes the marvel yet greater, when we only had 300 inches in the springs on the east side.

A If there were no ducts the marvel would be still greater, because behold, you wouldn't have any water there.

Q You were able in the year 1902 to take 300 inches from

your pumps, or 300 inches, from your pumps just to the north, which corresponded pretty closely with the natural flow of the springs.

A You could have done the same thing at the Y tunnel if you wanted to.

Q Now, you have got your ducts scattered through a region of material which you say you don't know whether it is 900 feet, or 4500 feet in width, carrying to the region of the Cucamonga Springs - that is the output of the whole business?

A Who said that?

Q I understood you to say it. Some 300 inches to the springs, and 704 inches for the whole district.

A The springs are only a part of the output there; the Lone Star tunnel and wells on the east side are in the old formation, and the Y tunnel, and the 35 acre tract tunnel; then we have the Old Settlers' artesian well, Upland Water Company's artesian well, Sunset Water Company well,-.all of them are drawing on that supply, of 704 inches, which is divided between the ancient and the modern alluviums.

Q Well, in the Springs, before they began to be depleted, there was a supply of 300 inches or more wasn't there?

A They varied; it was much lower than that at times and higher at times, depending on the developments you made there and tunnels you made there, and depending on the rainfall of previous years.

Q There was commonly above 300 inches wasn't there?

A I think the testimony in the case will show that there was there~~; I will say~~ and will show that there was a radical decline beginning in 1890, down to the year 1905.

Q I am talking about the natural flow of the Springs some 300 inches.

A You are trying to make me say the natural flow was 300 inches or more, when the figures don't show it; they show a decline and a varying flow.

Q I don't care anything about that; at any rate there was a quantity of water issuing from the Springs, which varied between 150 and 400 inches, put it that way.

Whatever quantity emerged from the Springs, little or much; this testimony is not at all addressed to getting any admission as to the quantity of water there; whatever quantity emerged in the springs, according to your view, emerged from these ducts?

A It did; through the course veins, or as you call them, ducts, in the older formation.

Q You called them ducts and veins.

A Well, that is one word for it; if you don't mean the word as an artificial duct, it is all right to use it in that way.

Q You have examined the area called the Cucamonga Springs?

A On numerous occasions, yes.

Q And you know that the water emerged there, through a territory, through a district, that was approximately 50 feet in perpendicular elevation do you not?

A It might have been greater than that; I wouldn't say; I know there were large areas of cienagas there in 1887.

Q Well, they lay on sloping ground?

A They lay on the side of the hills, and in the ravines and canyons and gulches there.

Q And the water appeared in the channel of the stream it-

self, for something like half a mile didn't it?

A I can't fix the distance, but it was a long distance and covered a large area, in the early days, before the Y tunnel was built.

Q It was in that neighborhood, and the perpendicular elevation of that district in which the water was first brought to the surface was in the neighborhood of 50 feet wasn't it,- you have made some examination of it?

A I wouldn't state what it was; I wouldn't state without kk looking that up, as to what the elevation was, but I know that it was over a large area, and over a great difference in elevation, showing that there was great resistance to the emergence of the water.

Q Is it possible that in your studies of the country there, that you have not made any observation of the difference in elevation between the lower edge we will say, of the Cucamonga Springs district and the upper?

A Well, that has been variable; and you know it was all changed before I ever made any careful study of that country; the Y tunnel and the Lone Star tunnel were both driven, before I made any study there; for that reason I think Mr Wright would be the best authority on what the original conditions were; I saw them but I didn't make any measurements.

Q You don't know how wide they were, extending longitudinally along the side of the inclined plane, which formed the surface of the ground there.

A No, I can't give you the measurements; Exhibit 81 shows pretty well what the area was in 1900, after the Y tunnel was built, and I think that would be the best evidence on

that subject that we have in this case.

Q All right; the area in which the springs and cienegas appeared would have a range at any rate of not exceeding 100 feet in perpendicular elevation, would it?

A Well, I don't want to state; I observe on the ground that the old peats would extend almost to the top of the Red Hill.

Q You mean adobe land?

A I mean the black vegetable tint of the Red Hill; I think the water has probably risen as high as the summit of the Red hill almost, at times, in the ancient times before any use was made of the water; ifyou subtract 1255 from that elevation, you will get the range which will be the maximum, so far as we can tell from any signs on the surface.

Q Considering that the water from the Cucamonga Canyon, the total output of which you estimate, to be about 700 inches, or a trifle over, is about half of it, as I understood your estimates, taken up by the old alluvium, through a district of country, of upturned edges of strata, in thickness from 900 feetto 4500 feet, and of unknown extent eastand west, upon what reasonable hypothesis are you to account for one half of the water, the total output, one-half or thereabouts of the total output of the Cucamonga Canyon, or 300 inches, appearing in these Cucamonga Springs, within a little narrow confined district, of 50 to 100 feet in perpendicular elevation, and of irregular extent of half a mile or so, along the inclined plane which formed the surface of the ground there, - why that convergence of these numerous ducts into that one narrow contracted district?

A Correcting your distance by including the west side of the Red Hill also, which had some of the natural spring water I would state that the reason for that is very simple; the place where those springs appeared is the only place which was lifted high enough to be denuded, and the denudation of that which is illustrated on my geological section Z16, would remove enough of the surface at that point to make that the easiest outlet, and following the universal law of hydraulics that water will always seek its easiest outlet, and that being the shallowest covering, would be comparable to the weakest place in the walls of a pipe line, and it would break out at that point or those points.

Q On the contrary, that seems to be the highest elevation of the so-called old formation, anywhere in that neighborhood.

A You misinterpret~~y~~ my answer; the answer was that originallyall of the strata were laid down of about the same thickness, in the same line east and west; and that these were uplifted so high, that they were exposed to the elements and eroded, which made the covering thinner at that point, and being thinner at that point, water would seek its easiest outlet there, and break through there, instead of through the other points which were thicker, and had never been eroded any.

Q Referring, if you please, to page 1194 of the testimony given in the case of McPherson vs. The Cucamonga Fruit Land Company, lines 3 to 11, I inquire of you if you gave this testimony at that trial:

"Q In your report you speak of the water sources, including ~~principally~~ springs cienegas, percolating or seepage water and artesian waters: when you used the term artesian water

what did you have in mind?

A I meant that it was water which after it was tapped in a wellwould rise in the well; the term comes from the French place, Artuas, where the first artesian well was discovered, and it simply means that when thewater is tapped that it rises in the well."

Did you give that testimony at that time?

A I did.

Q Were you then speaking of the report which you made to the San Antonio Water Company, about the springs, cienegas, percolating or seepage water, and artesian waters in the neighborhood of the Red Hill?

A I think I was referring to one or the other of the two reports which I made; I made two reports; one alone and one with Mr Newman.

Q It had reference to that same district.

A It had reference to that same district.

Q Did you give that testimony?

A I gave that testimony; as you can only determine the rise in the well by observing its relation to the surface water; that is what I meant by the testimony; it is impossible to determine it in any other way; if it does not rise above the surface water you have no way of knowing whether there is any rise or not; if I had some attorneys to cross examine me I might have added a good deal to that answer, because they would have asked me to explain what I meant, but that is what I meant.

The Court: You will have no such ground for complaint in this case.

A I think this case will settle all doubt as to what I meant by that expression.

Mr Britt, Q I don't think it needs any attorneys to prompt you to explanation; you are more prolific of that than water in the 16th street wells.

A When you are trying to misinterpret what I say, I have tox explain what I mean.

Q I ask your attention to page 1091 of your testimony in the same case, or to get the context I will turn back to page 1090, line 24: Did you then give testimony, at the trial of the case I mention, the McPherson case, as follows, commencing at line 24, page 1090:

> "When I speak of the year '97 I mean '96-7; the runoff was measured during that by the United States Geological survey, in the San Gabriel and Santa Ana River; that was a year slightly below the average, and the total runoff on the San Gagriel watershed was .469 second feet per square mile, and for the ~~San Antonio~~ Santa Ana water shed the run off was .46 second feet per square mile; the rainfall at Los Angeles was 14.28; and at San Bernardino I think it was 16.74, which is somewhat below the average; it is reasonable to suppose that the runoff would be fully as great on the Cucamonga Canyon watershed as these two watersheds; that is the only basis of calculation which I think I have on the subject.

Mr Gregg, Q You know the extent of the Cucamonga watershed?

A I know the extentof it.

Q When you say runoff do you mean the surface run or all?

"A That means all the runoff, measuring the surface in those streams storm and normal.

What is the result of your computation?

A I think the watershed of the Cucamonga Canyon, as near as can be determined with the planometer, and the topographical map is 11 square miles; and I think it would be fair to assume that the runoff in a year like '97 would be something like between .5 and .6 second feet per square mile; I think that would be a fair assumption; in an average year it might reach as much as .7 of a second foot per square mile; ofcourse the amount of water you would obtain would be by multiplying the area by the product per square mile; at .5 of a second foot it would give 5½ second feet, which would be equivalent to 275 inches of water? "

Did you so testify?

A I testified to that; that refers to the watershed above the mouth of the canyon; and at .7 of a second foot per square mile it would be 385 inches of water for an average year, and in this case I testified that same watershed would produce 364 inches by the Arrowhead curve, which is about 20 inchesless than I testifiedin the former case.

Q Didn't you testify here that the watershed would produce 704 inches of water?

A Not the Cucamonga Canyon; that was all of the watersheds from San Antonio to Day Canyon; I said the Cucamonga Canyon would produce 364 from the mountain shed, alone, covering the same 11 square miles; I have reduced it 20 inches from the knowledge I acquired from the Arrowhead curve.

Q Do you think the 11 square miles or thereabouts of watershed depicted on this map Defendants' Exhibit F, below the mouth of the canyon, the Cucamonga Canyon, adds anything materially to that runoff?

A The 11 square miles below?

Q At all comparable with the runoff above the mouth of the canyon?

A I have given all of those figures separately in a tabulation which you will find in the testimony, for each of the areas, depending on the elevation, and I now turn to my book and I see that I gave 365 inches as coming from that 11 square miles above the mouth of the canyon.

Q Is not 275 in this testimony here?

A No; 385. The average would be .7 of a second foot per square mile, which is 7.7 second feet, and you multiply that by 50 and you have 2 385 inches. Taking a lower figure, basing it on .5 of a second foot per square mile, you obtain 275 inches. But that was applicable to a certain year only, and not to the average.

Q What I am getting at is how you have got to get over 700 inches at the present time as the run off of this Cucamonga watershed while it was only, as we see here, 275, and you say that was somewhat below the average, or 385, if you want to add to it, as I think I perceive from your answer you are disposed to do--

Mr. Mcinley: I submit that that is an unfair criticism--

Mr. Britt: Counsel misunderstands.-- To bring it up to the average/

Mr. McKinley: The testimony of the witness was 704 inches for all of those watersheds, and not the Cucamonga watershed.

Mr. Haskell: That is a certain amount of run-off after excluding the storm.

A And including the percolating water, while this former testimony refers only to surface xx run-off, normally, at the mouth of the canyon.

Q What did you include in that estimate of 275 inches given in 1900?

A I think that extract you read shows that it was based on the measurements on the San Gabriel and the Santa Ana for the season of 1897 and '8 which was xxxxxxxx below the average, and that applies only to that one year.

Q You said here that the run off was the whole, both storm and normal.

A On the surface. That is what I said. The court asked me what I included, and I said everything on the surface.

Q The Court asked do you mean the surface run-off or all, and you said it means all the run-off measured on the surface, storm and normal.

A Yes; which excludes the water under the surface, or the underflow. That question relates to the surface run-off and has nothing to do with the character of the basin or the storage in that.

Q Isn't it all surface run-off?

A I don't think so at the mouth of the canyon. It might be at the Red Hill.

Q I should suppose it would be at the mouth of the canyon.

A That then would saturate the gravel bed in the canyon which feeds the underflow.

Q But the surface run-off--

A You can't measure that on the surface.

Q You can before it gets into the ground.

A I never was able to lasso it before it got into the ground.

Q You measure it better when it is under the ground.,

A You can measure it after it comes out of the ground at the Red Hill; but you can't measure it before it got into the ground.

Q It may be plain enough, the 275 inches or, if that is somewhat below the average, the 385--

A It relates only to the 11 square miles, and that is a

little more than I testified in this case.

Q. Does the rest of it come from the portion of the water shed below the mountain canyon?

A. No. And from the other watersheds adjacent to that which I have shown within those watershed drainage areas on exhibit P. In this case we have considered everything down to Base Line, and in that case we only spoke of what was at the mouth of the canyon.

The Court: I don't think you mean what you said in your last answer. (Answer read.) Is that what you meant to say?

A. That "no" would seem to make my answer mean two different things, whichever way you want to interpret it. Strike out the "no" and my answer will say what I mean. Namely, that it includes the 20.4 square miles-- not 20-- 21.3 square miles of the Cucamonga Canyon down to Base Line. When I am speaking of the run-off in Cucamonga Canyon in this case that is what XXXXXX it means. And also, what we have in addition at the mouth of the canyon, some of the mountains which do not drain to the mouth but drain into the valley below that point, as you see from exhibit P; and when you speak of 704 inches at the Red Hill, that is the product of what is contributed by the San Antonio and Cucamonga and Deer Canyon and Day Canyon, and is not confined to the Cucamonga Canyon alone.

Here the Court takes a recess until two O'clock p.m.

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AFTERNOON SESSION:-

Mr. Haskell: If the Court please, we move now for leave to file an amendment substituting Hannah C. Rundle, administratrix of the estate of George G. Rundle deceased, one of the plaintiffs in intervention, and also Ashberline M. Turner in lieu of Matthew Turner, now deceased, Ashberline Turner having recived by deed the entire interest of Matthew Turner in the property in controversy, before his death. And-I will ask that it be stipulated by all parties that George D Rundle died intestate on the 18th day of December, 1906, at the City and County of SanFrancisco in the State of California, and that thereafter, to-wit, on the first day of February, 1907, by order duly made and given in the matter of the estate of George G. Rundle, deceased, by the Superior Court of the City and County of San Francisco, Hannah C. Rundle was appointed administratrix of the estate of George G. Rundle, deceased; and that thereupon letters of administration were issued in said matter to Hannah C Rundle and she thereupon duly qualified as such administratrix and ever since has been and now is the duly qualified and acting administratrix of the estate of said decedant.

Mr. McKinley: We will stipulate to that.

The Court: You put the cart before the horse. The stipulation that you want is that letters were issued to her and that thereupon she qualified. I suppose you meant them reversed.

Mr. Haskell; Yes. And that all the right, title and interest of Matthew Turner in and to any of the real prop-

in controversy here as shown in evidence in this case, has within the last two months been transferred to Ashberline M. Turner. Is that so stipulated?

Mr. McKinley: We will stipulate that whatever right, or title Matthew M. Turner had was transferred to her.

Mr. Haskell. That is the effect of what I asked.-- As shown in the evidence.

Mr. McKinley: It appears that the testimony was taken after the death of J. G. Rundle. Do you want to commence over?

Mr. Haskell: And it is stipulated also that George G. Rundle is dead and that Matthew Turner is dead.

The Court: Do you want to stipulate the evidence in that has already been taken?

Mr. Haskell: Yes; and that the evidence already introduced in this action in respect to the title and rights and interests to real property and water rights already introduced in this case in reference to the interests heretofore belonging to Matthew Turner, and the interests heretofore belonging to George E. Rundle, be considered in evidence in reference to the parties now before the Court.

Mr. McKinley: That is satisfactory to us; but it should be a stipulation of all parties.

Mr. Britt: Plaintiffs agree to the same proposition.

Mr. Curtis: No objection.

Mr. Conner: We agree to it.

Mr. Goodcell No opposition on our part

Mr. McKinley: It is stipulated that the allegation in regard to ownership and so on be deemed denied. That is, as a matter of pleading.

Mr. Haskell: Do you mean in reference to this amendment?

Mr. McKinley: Yes. I don't know what you allege, and I don't want to have to file an answer.

Mr. Haskell: Certainly.

The Court: I suppose that the stipulation--

Mr. McKinley: That the original answer stands as an answer to this, will be sufficient.

The Court: That the complaint in intervention and the amendments thereto be deemed denied as covering the parties now before the Court.

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F. C. FINKLE.

ReCross-Examination Resumed.

Mr. Britt: Q Proceeding east from the mountains of Cucamonga Canyon, and along the foot hills, what is the first well of which you have any record or which is in evidence here in this case to you knowledge?

A Along the foot hills?

Q Yes; to the east of Cucamonga Canyon.

A How near to the foot hills?

Q Oh, well, say as far as the line G.H. or the locality indicated by the line G.H. on the map exhibit F?

A You mean north of the line G.H. and between that line and the foot hills?

Q Yes; the locality marked by that line.

A And east of the mouth of the Cucamonga Canyon?

Q Yes.

A I don't think there is any. Experimental shaft no. 3 seems to be south of the Cucamonga Canyon mouth but east of that I don't know of any well north of that line.

Q Experimental shaft no. 3 is no great distance from the Frankish & Stamm tunnel?

A As shown in Exhibit D, it appears to be right in the wash due east of the Frankish & Stamm tunnel.

Q You mean the Cucamonga wash?

A The Cucamonga Wash.

Q Then there is no well or tunnel of which any record appears in the evidence or the record of which you are acquainted with in that district along the foot hills, and

proceeding east as far as Day Canyon?

A You are now referring to tunnels as well as wells.

Q Of which any record appears in this case-- or wells, either.

A As to the wells, I don't know of any; but there are tunnels east of that which do appear in this case in the record.

Q There?

A One in the mouth of Day Canyon which I testified to and I think Mr. Trask referred to it, and Mr. Trask referred to another tunnel, at least, in some small canyon.

Q Where?

A I couldn't tell you where that was, but I know that there is at least one tunnel between Day Canyon and the Cucamonga Canyon tunnel.

Q Where is that?

A I can't locate that as Mr. Trask referred to it as being a small tunnel that some rancher had driven in .

Q Is there any record of it?

A Only what his testimony discloses. I have been in there and saw one tunnel and I think that is probably the one, but I can't locate it because I didn't make any survey. It is in a small ravine some distance east of Cucamonga Canyon.

Q You don't know the record of the tunnel any further than as disclosed by Mr. Trask's testimony?

A I saw it once in going by there, and there was water coming out of it, but I don't know its exact location. We could see the place when we were up there with the Judge of this court and the attorneys, a green patch and improvements, in the foot hills east of XXXXXXXXX the canyon.

Q Do you know by inspection what material came out of the tunnel?

A No, sir; I didn't pay any attention to it.

Q Proceeding westerly from the mouth of the Cucamonga Canyon--

x There is the Frankish & Stamm tunnel and the shaft at the head of it about which Mr. Trask testified. Those are the first excavations, are they?

A The first I know anything about except the one in the canyon, because you know there is the Loamosa Tunnel in the ~~Canyon, because you know there is the loamosa tunnel in the~~ Canyon, right in the mouth of the canyon itself.

Q Proceeding x thence westerly along the foot hills, what is the next well or tunnel of which any record is within your knowledge or has been produced in evidence here, north of the line G. H. or the locality indicated by the line G. H., on exhibit P?

A The first tunnel or wells north of that line and west of the Frankish and Stamm tunnel that I know of is the San Antonio Tunnel at the mouth of the San Antonio Canyon.

Q Then these several tunnels, wells and shafts just described by you east and west of the mouth of the Cucamonga Canyon, and north of the locality indicated by the line G. H. on that exhibit P, are the borings made in numerous places along the foot hills, and also the wells and shafts which you spoke of as having been sunk ~~by~~ appear in many places along the foot hills, at pages 4462 and 4463 of the Reporters transcript, in support of your opinion?

A What ~~xxxx~~ line do you begin on?

Q Well, you might refer to lines 14 and 15 on page 4462 and lines 9 to 15 on page 4463, in support of the opinion which you gave that there was no continuity of water plane in that district. A: Those five tunnels and experimental shaft no. 3 are the only ones in this district. Of course I had other borings in the foot hills in this country which might have a bearing on it, but that is sufficient to support what I have said.

Q To support what you have said, down to the depth of those shafts or tunnels-- those numerous borings that you have along the foot hills?

A Yes; what actually demonstrates down to the depth and then deductive reasoning from that and other facts would make my opinion that the same conditionx does exist and extend further down.

Q That tunnel of the Loamosa Company has been there for some 20 years, has it, or more, at the mouth of the Cucamonga Canyon?

A I don't think that has been there for 20 years. It was commenced-- Mr. Trask's testimony tells when it was commenced, and I believe he placed the time that it began in '89 or 1xxx '90. That would be 20 years, but it wasn't completed until later.

Q Do you know when it was completed?

A I know it was completed in '97.

Q Completed in what way?

A That is, to bedrock. Whether it was completed the year previous or two years previous, I don't know. But it was completed shortly before thatx.

L. BENJAMIN
OFFICIAL REPORTER
SUPERIOR COURT

Q Was there any material increase of water by the completion of that tunnel which you measured?

A I personally only measured that tunnel once after it was completed in '97, except my second measurement in 1900, and I am not able to say except xxxxx xxx xxxxxxxxxxxx from inference, that when a tunnel strikes bedrock it diverts all the water of the underflow.

Q Are your measurements in the record?

A Yes.

Q Do you remember what they are?

A I think my first measurement was 100 inches and a fraction, and the second one was 126 and a fraction.

Q You know, do you not, that this diversion amounted to 200 inches some ten years previously?

A That diversion has varied no doubt, and I think the matter has been wholly regulated by the amount that would flow in the stream, and the needs of the Icamosa Water Company. They have a right to divert as much as they need up to the full flow of the stream.

Q They never diverted more than the full flow of the stream?

A So far as I know they never diverted more than 220 inches or thereabouts, that being the capacity of their pipe line, about. The stream doesn't often flow as much as that in the irrigating season.

Q You never saw it flow anything much in the irrigating season, did you?

A No; I am taking that from Mr. Trask's testimony as to the measurements he has given in this case.

Q. In your re-direct examination yesterday concerning some measurements made by yourself and Mr. Trask a few days ago in the neighborhood of Cucamonga Springs, did you state all the measurements of water made by yourself or in your presence on that visit?

A. I did.

Q. Did you give all the elevations of water in wells which you took on that occasion or which were taken in your presence.?

A. I did.

Q. Did you measure or did you see measured the water flowing from a little cienega to the east or easterly of the Y Tunnel?

A. I did not.

Q. Did Mr. Trask show you a weir that was placed to measure the flow of that cienega?

A. He showed me no weir except the weir in the Y Tunnel Division Box, and we didn't go east of that point. We measured the Y Tunnel Division Box and not the mouth of the Y Tunnel.

Q. You are aware that one Mr. Shepley kept an account or, rather, kept a record of measurements of water made by him mf for the San Antonio Water Company out of the Y Tunnel and out of this little cienega that I spoke of , during the year 1908?

A. I am not aware of that.

Q. Was it done under your direction?

A. No, sir; it was not.

Q. Or upon your suggestion?

A. No, sir; it was not; I never was consulted about it.

Q I see a note here, and at the possible risk of repetition, this note reminds me of a question that I had in mind which may have been asked already; and that is, whether the bulkhead in the Lady Tunnel is so placed that all of the water discharged into the Lady Tunnel comes in above the bulkhead?

A You would have to ask someone else about that, as I didn't have anything to do with building the bulkhead. If it were built at some point it might include all the water, and at some other point it might not. That is a matter Mr. Trask could tell you about. I don't know. I had nothing to do with putting that bulkhead in except to consult with Mr. Trask about the plan of the bulkhead; but as to the actual location of the bulkhead on the ground or the direction of it, I had nothing to do whatever.

Q I have understood you to say that for the purposes of your deductions and inferences here you have used the elevations of the wells as they have been testified to here and brought into the records, without regard to whether the wells were pumped or not pumped at the time the elevations were taken .

A Yes; the record shows when they were pumped and not pumped, and in some cases I have myself stated when they were pumped and not pumped.

Q I observe, Mr. Finkle, a statement about the nature of the successive seasons, whether wet or dry, to the effect that 1904-05 was the first real good year for a number of years. Do you not overlook the circumstance that the year 1902-3 was a year materially above the average of rainfall?

A Yes; I observed that circumstance, that it was slightly above the average; and in making that reference I referred to the period after the final break or termination of our dry cycle.

Q Wasn't the year 1900-01 a year also above the average of rainfall?

A But that was also in that dry cycle beginning back in '93 and '4, the dry cycle beginning in '93-4 and ending with the season of 1903-4, being 10 or 11 years.

Q 1894-5 was a year very considerably above the average rainfall, wasn't it?

A Yes; that was above the average; but the year previous was the first dry year of which we have a record, namely '93 and '4, which was really the beginning of our dry cycle, through which were interspersed a few years of more than average rainfall.

Q And 1896-7 was a year of more than average rainfall?

A It was; and the year previous was a very dry year again.

Q And when you say 1893-4 was the first dry year, I suppose you mean it was the first year of as great aridity in a number of years previous to that? You don't mean it was the first dry year?

A No; I don't mean that. I mean that the rainfall records are divisible into cycles.

Q I am not going to ask for any speculation of that nature. and I ask that the answer be stricken out. We can all make cycles out of the rainfall record the same as anybody else.

The Court: Stricken out.

A I was simply telling you what I meant. If that is not what you want, there is no harm done. If you don't want to know what I mean I don't have to tell it.

Q You spoke in the course of your testimony in answer to questions put by Mr. Goodcell about some small tunnels running through the material at the mouth of the little canyons, that these added to the quantity of diversions? Where are those small tunnels that you speak of?

A Well, those are what we call foot-hill tunnels that the small ranchers have penetrated into the foot hills.

Q About where are they?

A I can't locate any of them, as I never made any measurements about that. But as you travel along the foot hills you will find that the ranchers have made tunnels all along between here and Los Angeles; that they are quite common and numerous.

Q So far as this district that we have had under consideration here, say from Day Canyon to San Antonio Canyon, do you know of any besides this little one that you mentioned a few minutes ago as having been seen by you, without any observations, however, of a definite character?

A I don't know of any except the four which we have referred to and which are larger.

Q That is to say, the Frankish and Stamm tunnel, the Hermosa Tunnel and the San Antonio Tunnel at the mouth of the San Antonio Canyon?

A And the Day Canyon Tunnel.

Q Those are all?

A All that I can locate; but I am under the impression that

there are others which you can find, but I don't want to testify about that because I never made an inspection of them.

Q Do you know when the Day Canyon tunnel was excavated?

A I don't know when it was completed, but in 1896 I was there giving line and grade for work on the tunnel.

Q Had it been excavated previously?

A It was ~~had been~~ begun previously, but they had been working on it, and I would be there once or twice that year making a survey for them to run it by, and it wasn't completed that year but a year or two subsequently.

Q How much water was flowing from the Day Canyon tunnel at that time?

A I think I have a measurement right here. On the 20th of October, 1896, when that tunnel was being worked, it was flowing seven inches of water, and I measured that on that day.

Q Did you measure it at any time afterwards?

A No; I never measured it after it was completed. I was there then to give them line and grade of the tunnel, and I took this measurement ~~fax~~ of what they then had.

Q Did you make any accurate note or note at all of the distance which the tunnel was driven at that time?

A No; I did not. I was there for the purpose of giving them a course to run to connect with a shaft sunk down to the water level further up, and I merely ran a line into the face of the tunnel and gave them a course to follow to strike that shaft. But I have no note of the distance to which the tunnel was driven.

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Q Can you indicate on exhibit P where that tunnel was situated?

A Not exactly; I can state that it was on the west side of the wash and marked with a dotted line below the mouth of Day Canyon and in the debris cone, but the exact point I cannot state,-- on the xxxxx west side of that wash running up to the mouth of the canyon/

Q Above what surface contour line?

A The tunnel probably started below the 2250 contour line.

Q How much below?

A I couldn't state; but it wasn't far from where that wash begins to branch out that the mouth of the tunnel was started. I have no way to locate that accurately.

Q And it extended in what direction?

A It extended practically parallel with the wash, or it might have run under the wash some; there was a shaft sunk up there and their desire was to run the tunnel to that, and I gave them the survey for doing it.

Q What was the depth in the shaft to water?

A I don't know; I never made an observation. I looked it up to see if I had it the other day and I couldn't find it.

Q Did you examine the shaft at the time?

A I did.

Q If you were running lines from the tunnel to the shaft wouldn't that necessitate your observing the depth of the shaft?

A No; simply the location; because they wanted the course at which they would strike the xxxxxx bottom of the shaft. They knew themselves that the water was much higher

than their tunnel, and I find by looking over the notes that there is no record of the depth of the shaft or depth to water.

Q But they were running that tunnel there with a view to striking the water which was standing in the shaft?

A The water seemed to be moving across the shaft. We dropped some chips in it and they floated from one side to the other, and they thought they struck a large stream. Their object was to run a tunnel under that and then make a connection.

Q If you were dropping chips into the shaft, don't you have a recollection of the depth of the shaft to water?

A It wasn't very deep, because I know we could easily see the water and watch a chip when it was down there. But I made no measurement and I wouldn't want to state what the depth was.

Q Howfar was the shaft from the mouth of the tunnel, approximately?

A I might be able to figure that out from these notes by adding up a certain number of courses here. My notes show that the shaft was 253.55 feet from the face of the tunnel.

Q Do you know what the rise of the ground was from the tunnel to the mouth of the shaft?

A I do not. I didn't take any levels; I merely ran a line with the transit to figure a course which they could follow in order to meet the location of that shaft

Q You are not acquainted with the water plane of any of these wells which in 1890 had penetrated to the water plane except, as I understood you, by the testimony of Mr. Trask.

Had you any observations personally of the depth to water in any of these wells as early as 1890?

A I never had any as early as that.

Q Do you consider that the elevation of the water plane in 1890-- that having been a year of extraordinary rainfall-- is any safe criterion upon which to estimate the height of the water plane in years either before or subsequently?

A Not unless you make the proper correction. And if you have the water plane in two wells in 1890 and one of them is still in existence and you measure the water plane now and obtain the difference there, and the other well has been filled up, I think you can make a very fair deduction by making the same correction at the other wells at which you had the water plane in 1890.

Q Is it not reasonable to say, taking any wells which may be affected at all by the rainfall of a single season, that the water plane in the year 1890, following the early winter of that year,-- say from the month of March-- would show an extraordinary rise much above the average of previous years and much above the average of subsequent years?

A I would expect the water plane in all wells after 1890, which was only six years distant from '84 and there had been good years in between, except '85, I believe, -- '84-5 was rather a low year and '86-7 was not a very high year, but most of those years had been good years, and the effect of '83-4 would undoubtedly still be apparent in 1890,-- and I would expect the water plane in all wells to be high that year.

Q Did you know of localities here in this part of the country which, following that ~~dry~~ very wet season of 1889 and '90, the country seemed to load up with water and the water exuded and stood and ran in streams where it had not run before within the memory of man, and continued to run quite a while afterwards? Did you know of such localities?

A Yes; I know in a general way that I had lived here three years and I know that '90 and '91 were both years when the water was prolific in springs and artesian wells and also high in surface wells. And the effect of that long cycle of wet years, with a few exceptions of dry years before that time, had caused a very large discharge and rise of the water plane everywhere.

Q What is the law of the variation of the transporting power of moving water,-- the transporting of materials?

A My recollection is, without looking it up, that it varies as the sixth power of the velocity.

Q Did you give a measurement here of the depth to water in the Haskell well, now called no. 7, before it was deepened by the San Antonio Water Company?

A I believe so. I think I have testified to all of those measurements. Yes; I have such a measurement and I testified to it.

Q State it again.

A 60.4 feet to water on the first of April, 1899.

Q You made subsequent measurements of the water in that well, I think?

A I think I have testified to all I have made.

Q Well, if you will just state, if you have them there

conveniently, I want to found a question on it.

A I haven't got them conveniently; I can look them up.

Q You haven't got them all together?

A No, sir; they are scattered through my notes. If you wish me to take the time to look over these notes I will give them to you over again .

Q No; you needn't do that. Have you ever made an examination, Mr. Finkle, of the place where the Hellman well no. 2 or the well at the head of the west branch of the Y Tunnel, called S in numerous of Mr. Trask's measurements, discharges into the Y Tunnel? Have you ever examined that place?

A Yes; I have been in there but not when the well was discharging.

Q You have never seen it when the well was running over into the tunnel.?

A I have never been there and seen it, but I have been there when it occurred. I was there on the seventh of this ~~the~~ month.

Q Did you descend the shaft to the tunnel where the well was actually discharging?

A No; I did not.

Q Have you ever taken an actual elevation of that point by reference to any datum plane of your own?

A No; I have taken Mr. Trask's datum always for all of my elevations; the same datum that he has used and testified to here.

Q In estimating the relative productivity of wells and the permanence of supply of water from a well, do

you take into consideration the extent or distance to which the well falls when it is pumped-- the extent to which the water plane declines when the well is pumped? Is that one of the elements?

A If you have any record of a well and know the output of water from it and can take those two elements together, they can give you some idea. But the mere fact of knowing the fall of the water plane without giving the amount of the water taken out, it wouldn't give much of a basis to work on.

Q And also the extent or rapidity with which the water plane limits its normal level or approximately its normal level? Is that one of the elements which assists in reaching a conclusion on the productivity of a well,-- whether it goes quickly back to the original level after ceasing pumping or whether the rise is slow?

A Of course, if that is not influenced by other wells pumping from the same gravel bed,-- if you have several wells in the same gravel bed during the one season, you might be deceived. Where there are several wells pumping from the same pocket the recovery might be slow as compared with a locality where there is only one well. Taking those things for the sake of comparison we have to take the surrounding conditions,-- how the surrounding wells might have affected the water plane, and therefore, while it is an element, it is one which must be used with great caution in arriving at a conclusion.

Q If you undertake to compare the productivity of wells you would take into consideration the length of time during

which each is pumped and the quantity of water discharged during the time?

A Time is one element entering into the quantity; and if you are measuring quantity you have to consider it as one of the elements. Discharge and time make up the quantity. But that, again, has to be used with an understanding of the other facts, like other surrounding wells in the same pocket.

Q In your testimony here about the productivity of the Haskell well and well no. 3 your plan was to take the sum of the amounts pumped at the various times and divide by the number of measurements?

A Yes; if you mean by that the sum of the quantity of water pumped at each measurement, I would say yes, that is the plan I followed

Q You have the pumping of those two wells before you for the year 1900, have you?

A I think I can find it here. Yes; I have that before me. Page 2469 of the transcript.

Q Did you observe there that the Haskell well was pumped, as indicated by those measurements, from February 11 to October 9, or approximately eight months, while well no. 3 was only pumped from April 3 to October 9, or six months?

A That is the length of time measured by those measurements in each case.

Q So it would appear that the Haskell well was pumped for some two months longer in that season than the well no. 3, as far as these measurements show?

A So far as the measurements show anything, that is the only deduction you could make. That is all you know about it.

Q In 1901 did you have more than one measurement of those wells?

A Of which well? I would have to look at page 330 and 337 of the transcript. That is where I obtained those measurements-- Oh yes; I have that volume here. No, this is only extracts from the first volume. I find a measurement of well no. 3 on page 330, 70 inches on July 9, given by Mr. Hobby's report. Then again on October 14, 1901, on page 336, I find a measurement of 72.6 inches for well no. 3 which was called well no. 1 then; and I find Haskell well no. 1, which is well no. 7, 68 inches. The two Haskell wells were pumped.

Q They have each the same amount?

A I only take the one I was comparing. Well no. 2 was also pumping the same amount.

Q And you count those two wells as being substantially identical as the two Haskell wells?

A Just as identical as those two, yes. If you are going to count both Haskell wells, I would count in all the 16th Street wells. I only took one Haskell well at a time and well no. 3 at a time, and I had that right unless you compare the groups.

Q You thought the two Hakell wells, being 120 feet apart. in a comparison with number 3 which is 450 feet--

A Yes; if you consider them as groups, and considering the coarser material at well 2 and 3 which would cause one

well to influence the othermore than the denser formation at the Haskell wells, it is hard to tell which way would be the most unfair.

Q Haven't you observed that the two Haskell wells stand at any time within a few tenths of a foot of eachother in these elevations?

A They stand very close to eachother, and so do the wells 2 and 3. But that is a matter that is not worth discussing because no doubt the two Haskell wells are in close sympathy, and wells 2 and 3 are in close sympathy.

Q Is there any such close sympathy between ~~tw~~ 2 and 3 as there is between the two Haskell wells?

A That is a problem that I would have to figure on. It wasnot brought up the other day in anything you said. ~~that~~ If I was to compare the two groups and the degree of sympathy between the two groups, I would have to have some time to figure it out. I have given that subject very little consideration.

Q Yes; I rather think so.

Mr. McKinley: Would you like to stipulate that the wells along 16th Street are in sympathy?

Mr. Britt: I have heard your witnesses say it both ways,--that they were and that they were not.

A The problem that we were discussing was well no. 2 and 3. If you inject other wells I would have to determine it. It is a new topic altogether.

Q I am justified, I believe, in saying that we have treated the two Haskell wells in this case substantially as identical, and we are justified in that course by the

extremely close elevation which they preserve towards eachother in all stages. But your view is now that for the purpose of comparison you desire to treat no. 2 and 3 as having the same identity as the two Haskell wells.

A Unless you give me time in which to see if there is any difference or whether there is any reason for not holding so, I would certainly proceed on that presumption, and I would consider it extremely unreasonable to take well no. 3 by itself and compare it with both Haskell wells, when there are other wells in the same pocket that well no. 3 is, which might pump and have an effect on it the same as the other Haskell well has on Haskell well no. 7. That is my position.

Q I will say now, without taking time to read this column of figures, that your attention is directed to the elevations of water in the two Haskell wells as those elevations appear at pages 88 to 97 of the transcript and as they appear at page 3468 of the transcript and at page 2543 of the transcript.

A Do you wish me to make any calculations or comparisons based on that, or do you simply want me to know that this is in the transcript?

Q I wouldn't impute to you want of information that there was anything in the transcript about that, but rather that you would refresh your recollection in order that if the occasion arises it may not be made the subject of objection that you have not examined them.

A I would like to know with reference to what you wish me to examine those. If I am going to be asked anything on the

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toOmorrow, I would like to know what your point is.

A There isn't any point except that the two wells have precisely and substantially identity of elevation.

A I suppose we have all been aware of the fact that the two Haskell wells are somewhat closely related, and also that the 16th Street wells 1 to 5 are somewhat closely related. I think your figures in both cases show they are.

Q And I thought they were all somewhat closely related till I heard you deny it.

A I think I showed you yesterday that they were not by the figures on well no. 5 and no. 7.

Q To return to the subject from which we have digressed , I asked you about those measurements in 1901, and you have given how many measurements of well no. 3?

A I have forgotten now, it has been so long since.

Q How many of well no. 7?

A I have forgotten that too.

Q And for the purposes of your comparison , what time did you assume the two wells, no. 3 and Haskell well, were pumping during the year 1901?

A All I could assume was what was shown by the measurements, that on July 9 there was a measurement of well no. 3 and none of Haskell well, and on October 14 was the Haskell well measurement. From that it would appear that well no. 3 (if you have no other information on which to base your deduction) it would appear that well no. 3 pumped three months before the other one.

Q You find that the two Haskell wells pumped 136 inches?

A Yes; and the two 16th Street wells pumped 142.5 inches.

Q You put no. 2 in?

A Yes; if you put both Haskell wells in I want to put that in. I wasn't doing that. I wanted to make a straight comparison between the two wells.

Q In 1902 what measurements have you of the two wells.?

A The first note I have of a measurement is page 338 of the transcript. On that page there is given a report that on May 8, 1902, 16th Street well no. 1, which is the present well no. 3, at line 8, 70 inches. 16th Street well no. 2, 70.5 inches. I took my first measurement, 70 inches from 16th Street well no. 3, which is there referred to as well no. 1, and I was unable to find any measurement that year of the Haskell well being pumped at all. None of the reports or testimony in the record show any measurements of it, so I made no note of any measurement of the Haskell well. Now this same measurement of well no. 3, which is called well no. 1, is referred to on page 2899 of the transcript, and page 2716; but there was only one measurement, and that was the one of May 8, which I have given you. But there are none referred to in the Haskell well in any of those reports. There is no measurement given. So if you act on**x** that of your own knowledge and own information, the presumption would be that it wasn't pumped that year.

Q Is that your opinion?

A I haven't any opinion about it, unless you do as you did in the former case and take only the measurements as evidence. There being no other evidence before us, that is the only deduction I could make.

Q Did you note that Mr. Trask and yourself assumed that

the wells in that year were pumping 360 inches for 6 months?

A That was Mr. Trask's calculation, and I based my testimony on his table.

Q 360 inches for six months?

A No. 2, 3, and 4 were pumping that year, I say, according to Mr. Trask; and where he got the other water I am unable to state.

Q Where does it state that 2, 3 and 4 were pumped that year?

A You will find that in the report here of Mr. Saunders-- I didn't have any information in regard to 4. That is based on Mr. Trask's testimony. Personally I haven't anything except Mr. Saunders' report on page 2889 of the transcript, which gives 2 and 3.

Q Pumping how much?

A 140.5 as given there on the 8th of May from those two wells 2 and 3.

Q You know that 1 and 6 were not pumped?

A I don't know anything about it. I don't know where Mr. Trask got those figures. When you crossexamined ~~xxx~~ me originally I referred to that page of the testimony, as I had no knowledge on the subject.

Q Didn't you hear the testimony of Mr. Leeks that no. 1 was not put into commission till 1903 or '4?

A I might have been in Colorado when Mr. Leeks gave that testimony, as I was there part of the time during this trial.

Q You have no record of the pumping of wells 1 and 6?

A I have no record except Trask's testimony on page 2716.

Q Haven't you here testified yourself that well no. 6 was not pumped or very little, if at all?

A Since 1904 it was pumped to irrigate the land.

Q You haven't heard any testimony at all on the subject?

A I haven't heard all of the testimony, because the first session of the Court I was in Colorado, and the second session I was also in Colorado till part of it was over.

Q You don't know whether the Rubio well was pumped or not?

A Not in 1902. I simply took Mr. Trask as authority, as he had given those figures at page 2716 .

Q You get out of your figures there 140 inches?

A For those two wells; yes, sir.

Q Now you have got 220 inches to get from somewhere else to make up the 360 inches which Mr. Trask testified and which you assumed to be the output of the 16th Street wells in 1902.

A I have a right to assume that his testimony is correct till you show it is not.

Q And you infer from that that the Haskell well was not pumped?

A I don't know anything about it. You didn't cross examine--

Q I am cross examining you now.

A I can't tell. It was stated on the other man's authority.

Q I want to know what your assumption is. You say you assume, because you don't find a record that the well was pumped, that therefore it was not pumped.

A You are not quoting me right. I said I couldn't find in the transcript of the case any measurements of the Haskell well that year, and I don't know whether they were pumped or not. And if you found your assumption on the record, unless I missed something in the record, that is the only

assumption I can make.

Q And you did assume it?

A I didn't make any assumption about it. I left it out that year altogether because I couldn't find any measurements of it. If you have any measurements I would be glad to add that to the ones I now have.

Q Well, assuming that well no. 1 was not in commission and was not pumped in 1902, and that no. 6 was not pumped in 1902, and the Haskell well no. 2 was not pumped in 1902, and that 2 and 3 yielded 140 inches: Then you would be reduced to the conclusion that no. 4 yielded 120 inches for 6 months?

A I am not making any conclusion on it. I don't know anything about it. You can draw any conclusion you wish to, and I will draw mine, and you draw yours. The fact is I am not drawing conclusions on things I know nothing about.

Q Well, that is new.

A And I don't propose to have you drive me into it, either.

Q Well, come down to 1903: What measurements have you of those two wells in 1903?

A In 1903 there was only one measurement of each well which was given by Mr. Trask at page 512 of the transcript. I took those two measurements and that is all I could find in the transcript.

Q And you conclude that the wells were only pumped on that day for which the measurement appears?

A I haven't made any conclusion about it. I simply compared the quantities of water pumped on those days with the previous time. That is the extent of my conclusion.

Q And conclude that they were pumped equally throughout the season? That would be a more reasonable conclusion?

A That is the way I put it in my figures because I took my percentage from those two measurements, and that is what it would amount to in making up my figures.

Q In what way?

A My figures that year were 60.8 for well no. 3, and 91.2 for well no. 7, and I put those into the detailed calculation which I gave

Q Then come down to 1904, and what did you compute the two wells as being pumped that year?

A That year I took the record testified to by Mr. Trask on page 82 of the transcript. No. 8 began pumping at 10;35 a. m. of May 19; no. 3 began pumping at 5 a.m. June 16, 1904;

Q That is, no. 8 began pumping almost a month earlier than no. 3?

A Lacking three days; yes.

Q What other measurements did you take?

A That is the extent of the beginning to pump. From that time on the record gives the days when those wells were pumped in each year, at various stages, which show clearly the length of time each of those wells were pumped in the different seasons. If you wish me to go over it I will do so, up to date.

Q I will inquire if you observe on page 88 that the elevation of the water in the well no. 3 is given on June 11, as 1347.8, and is not given again until October 4, when it is given as 1331.3. For the purpose of comparing the two wells do you assume that number 3 was being pumped during

that time from June 16 when it began pumping as shown on page 82, until October 4, when the elevation is given again, and no elevation intermediate between those two dates ?

A No, Mr. Britt. I took better evidence on page 83 when on January 7 at 11 a. m. "closed down for the season" there being notations in the margin of that table as to when all the wells were started and stopped, and there being no notation that well no. 3 was stopped, I assumed that it pumped clear through to the end of the season., particularly as there are measurements of flow from it on January 7, 1905, and in December and November.

Q Do you observe that between September 23 and November 18 that there areno measurements of water issuing from no. 3?

A I observe that in the table on page 82.

Q About six weeks there it appears in this table of water pumped from the wells that there is nothing pumped from no. 3 during that time?

A I didn't keep that record of measurements and I am unable to throw any light on the subject.

Q This table purports to be measurements of pumped water.

A Yes; but there is nothing said as to why-- I understand you to ask me why those dates are blank.

Q No; I didn't ask you why. But you don't infer from that, where it appears to be a table of pumped water and about six weeks or a month and a half when there was nothing pumped from no. 3,-- do you infer ffrom that that the well was shut down?

A I don't know whether I could make any inference or not.

Q If that is the way you figure you might draw that inference from it. It wouldn't be good evidence, but it might be so.

A I don't know as it is material what inference I may draw from these figures. I didn't make them.

Q Well no. 8, the Haskell well, was pumped through the season of 1904, beginning May 19, with no skips or blanks in the measurements until January 7, 1905.

A I see a measurement on every date given in the table from May 19, 1904, to January 7, 1905

Q And it was quite uniformly pumping a good deal more water than well no. 3?

A The average of no. 3 that year was 53.3 inches, and of no. 8, 75.83. No. 3 was pumped 71.5 per cent. of its 1900 record and no. 8 was pumping 67.3 pper cent.

Q So far as the pumping record shows, it pumped for about two months and a half greater length of time than no. 3?

A I haven't figured that out.

Q I see that you didn't, and that is why I am challenging the fairness of your comparison.

A As I understand it now, you wish to make a new comparison of the group, as 1 to 5, with the Haskell group. I didn't make that comparison.

Q No, sir; I am simply going to make a comparison of the relative quantities of water produced by those two wells.

A We have the pump record before us, and you say that it was pumped 75 per cent. or 70-something per cent. of the amount which it pumped in 1900, while your well no. 3 was

pumped 83 per cent. or thereabouts. But if you had taken into consideration the fact that well no. 8 was pumped about two months longer time that season, it would show a far greater percentage of water produced as compared with the other, wouldn't it?

A That may be entirely upset by what happened subsequently. I haven't gone through that. That is a new theory which I haven't considered.

Q I should think it would be a very obvious theory when you are trying to illustrate the proposition advanced here that the Haskell well because it is in closer material is about to become extinct.

A I know it to be a fact that it is in closer material, without any evidence of pumping to prove it. I know that from an observation of the material. In regard to this comparison that you are at present attempting to make, it is very differentx from the one I made. I wasn't trying to obtain an absolute quantity of water abstracted from the wells, but I was trying to make a comparison of the amount of flow coming from the well when pumped; and I don't believe there are any data in this record from which any man can tell how much water was taken from the wells. There was no clock register to determine it by.

Q When you are considering the relative productivity of the two wells, is not the material inquiry the quantity they have produced and their present status, rather than the percentage which they may pump on different occasions as compared with the pumping to which they were respectively subjected in the first season's pumping?

A That would be very well if you had a record from which to determine the facts; but not having the record I take the record of all the measurements, and they show that well no. 3 has produced in subsequent years 85 per cent as much as it did in 1900. No. 7 produced 65.8 per cent. If I had a clock register sheet I would have taken your method which you are now speaking of. But not having that data I took what we did have and made the best comparison I could.

Q You didn't take into consideration the element of time in which the well was pumped?

A We didn't have the element.

Q You have for 1904 quite plainly.

A That is only one year. The point I make is this: You can't prove things by one year. And not having a clock register records of the two wells, I merely took the average of all the [illegible] wells shown in the record, not even having a record of the time when they were pumped. In some years there is only one measurement. I took the evidence that was in the record. I didn't invent anything or assume anything that we didn't have.

Q Look at page 83 of the record that shows the pumping record of the two wells in 1905. Do you find that number 8 began pumping about a month earlier than no. 3 did that year?

A I do.

Q That is, it is stated "began pumping no. 8 about August 13, 1905; began pumping no. 3 about September 15, 1905, " approximately a month apart.

A Approximately a month. From that same page I also find

that in the summer wells 1, 2, 3 and 4 were all pumped, whereas only one of the Haskell wells was pumped. So undoubtedly there would have been axxxxxxxx a very heavy draught on the basin of no. 3 which would compensate for all that you have said about extra time.

Q You were making a comparison between well no. 3 and no. 7, remember, and the object to which your testimony was directed was to sustain the proposition that the Haskell well was petering out.

A No; I didn't say that. I said it declined more rapidly than well no. 3.

Q I quote your evidence the other day that it showed signs of exhaustion.

A I didn't use the words "petering out and exhaustion". You used it first; and I would want to see the record, if you think I did use it first.

Q In 1905 also the Haskell well yielded and was pumping more freely than well no. 3 and produced a considerably greater quantity of water on the several dates when it was pumped.

A The average for that year was only about 9 inches higher than the average for well no. 3, whereas in 1900 the average of the Haskell well was 35 inches higher than no. 3.

Q And you throw out of consideration the fact that it was pumped for about 60 per cent. longer time in 1905 than no. 3?

A Yes; and also for good measure I threw out the fact that wells 1, 2 and 4 were thrown out.

Q That is right, if you are drawing a comparison between the Haskell well and well no. 3. But it wasn't proper to leave

out the length of time in which the two wells were pumped.

Q You are entitled to your opinion on that.

Q In 1907 no. 3 wasn't pumped at all, was it?

A No, sir.

Q Now on the subject of the elevation of the water in those wells, you have Volume 1 of the testimony before you, page 88 and 89?

A In 1908, you are not going to take that up on the pumping?

A 1907 and 1908, I haven't any objection to going into that, but there is so much irregularity in the pumping of the two; sometimes they quit and sometimes they be in again.

A I expected you would stop there, because well no. 3 pumped the most that year.

Q I am not making any comparison between those two years. In 1907 well no. 3 was not pumped and the other was pumped intermittently.

A In 1908, however, which was the year I was referring to.--

Q You have the table of elevations before you?

A Page 88; yes.

Q You observe in January, 1908, the elevation of the water in wepp no. 3 was 1402.9 feet and in the well no. 7 it was 1393.1 feet.

A I observe that.

Q Then on July 3, of that year, both wells having been pumped, the Haskell well two months longer than no. 3,

You find that the elevation of well no. 3 was 1379.6, do you?

A Yes; I observe that that was 1379.6.

Q While well no. 7 or the Haskell well was 1379.2.

A I observe that.

Q So that the decline of the water in the well no. 3 from January to July was 23.3 feet, while the decline in well no. 7 was but 13.9 feet.

A That is what you would expect in the dry year with well no. 3 near the outlet of the basin.

Q Notwithstanding the fact that the Haskell well had been pumped, so far as the record shows here, -- it began pumping in February and no. 3 began pumping in April, and yet the decline to July 3 was 23 feet and a fraction for well no. 3 and only 13 feet and a fraction for well no. 7.

A I would naturally expect that because in the Haskell well the decline was due to the pumping and in well no. 3 the depletion would be rapid through the outlet through the coarse materials to the southwest.

Q Wouldn't that also be so whether it was a wet or a dry year-- relatively so, that the two wells ought to preserve about the same relation to eachother? Shouldn't they, whether it was wet or dry?

A A wet year would probably supply water faster to those coarse gravels over there, and it might not be that way, because the coarse gravel beds permit the rapid movement of water and the finer silts at the Haskell well permits much slower movement.

Q How many times have you told us that it takes four or

five years for the water to come down through the new alluvium and replenish those 16th Street wells?

Mr. Gregg: Objected to as irrelevant, immaterial and incompetent.

The Court: Sustained. Plaintiffs except.

Q And haven't you iterated and reiterated the proposition that it takes years before the rainfall for any season comes down to the 16th Street wells to replenish them?

Mr. Gregg: Objected to for the same reason.

The Court: Sustained. Plaintiffs except.

Q Come down to 1904.

A What page do you refer to? 89?

Q Yes. There is no record of elevations between 1900 and 1904. They are skipped over. On pages 88 and 89 do you observe in 1904 that on May 19 well no. 3 stood at an elevation of 1348.4 feet?

A I do.

Q Do you observe that the well no. 7 or the Haskell well stood at the same time at 1347.0?

A I observe that.

Q At page 82 do you notice that that was the date, May 19, 1904, when the Haskell well no. 8 began to be pumped?

Mr. McKinley: Objected to as not cross examination and calling for repetition.

Mr. Britt: It is preliminary.

A That is correct.

Q You notice that it is shown that no. 3 did not begin to be pumped till June 16, 1904?

A That is correct. 5 a.m. June 16, 1904.

Q Which was some four weeks later than the beginning of the pumping of the Haskell well? Now look at the elevation on October 4, 1904, of well no. 3. The elevation was 1331.3, wasn't it?

A That is correct.

Q And the elevation of the Haskell well was 1331.1, a difference of .2 of a foot between them?

A October 4?

Q Yes.

A That is correct.

Q Do you observe that in that time between May 19 when the Haskell well began to pump, to October 4 that the Haskell well declined 13.9 feet while well no. 3 declined 17.1 feet?

A I haven't verified those figures, but I assume they are correct. They are readily explainedd by the operation of wells no. 1, 2 , 4 and 5 that year, which would deplete the same locality where well no. 3 is, and the Haskell well wouldn't, and also by the outflow from the outlet near that point.

Q So that the fact is that although the Haskell well was pumped much longer and pumped a larger volume of water than no. 3, yet no. 3 declined as the effect of pumping materially greater than the Haskell well?

A You see yourself on page 82 that the other wells were operating near it in the same gravel.

Q Look here. Don't the other wells stretch out? Don't they have a much larger area to draw upon? Isn't each one drawing from its own source of supply immediately around it?

A In regard to those five wells, 1 to 5, I have always

assumed and I believe now that they draw from the same source of supply; that the Haskell wells also draw through that source of supply, but through denser material and further away, and that there is no influence of the Haskell wells on those wells 1 to 5. But I do say that where you pump well no. 3 and also all the other wells at 16th Street, from 1 to 5, the decline there would undoubtedly be more rapid in the water plane than if you pumped well no. 3 alone.

Q Why should it when each well has its wider extent to draw from?

A Because if you put four wells in close proximity like those, as I have explained, it takes time for water to fill up the voids. It may take years to percolate from above the line G-H on exhibit P; and if you deplete that locality, the water is not under pressure, and it can't fill up immediately.

Q If you have got five acres of land or of saturated material, and pump five wells distributed through it, should the fall be any greater than where you pump one acre with one well?

A If the five are all in the same plane of saturation. Because the water has to travel a long distance to reach that point when you deplete it.

Q Then your view is that well no. 3 declined more than Haskell wells because of the fact of the effect of the other wells, is that it?

A That is one cause; and the other cause is that it is near the outlet of the basin and in coarse gravel and material so that water can readily move down that rapid

grade toward the Tourwine well or shaft and experimental shaft no. 4.

Q The last proposition then would render it a less productive well than the Haskell well.

A Not necessarily. While it is near the outlet and in coarse gravel so water runs out of it, in summer, it is also true that when you have rains it is more quickly replenished.

Q After some years?

A I testified that the rainfall in that immediate vicinity replenishes the well rapidly.

Q If the water runs from well no. 3 more rapidly through your hypothetical and assumed outlet to the southwest, it is running through there all the time, isn't it?

A Yes; unless the well takes it before it gets out it will run out there.

Q Let me call your attention tox the ~~XIXXXLIXXX XXXXX XXXX XX9XX~~ element of date in 1906, when there was no pumping.

A What page?

Q Pages 94 and 95. You observe that well no. 3 on March 7, 1906, the elevation was 1344.3, wasn't it on that date?

A Yes, sir; that is right.

Q And that well no. 4 was 1343.4?

A Yes.

Q Well no. 5 1343.2 and well no. 6 1343.1, and the Haskell well no. 7 1342.5 and well no. 8 1342.4, the two Haskell wells being within .1 of a foot of eachother. Now

No. 7 and no. 3 differed how much in elevation at that time?

A 1.8 feet

Q Well no. 3 being the higher by that much?

A 1.8 feet higher on that date.

Q Now if this outlet to the southwest draws away from no. 3 at the expense of the Haskell well, why should there be that near correspondence on that date, and, particularly, why should well no. 3 be the higher of the two?

A I didn't say that it was at the expense of the Haskell well that the outlet drew it out. I said it was at the expense of no. 3.

Q If no. 3 drains out to your outlet why should the water at that time, when there was no pumping and hadn't been for a number of months, and the two wells being within less than two feet in elevation of eachother,-- why should no. 3 have the higher elevation, if as you stated a few minutes ago that it is drained off more rapidly by the outlet than the Haskell wells?

A That was after two wet years and the coarse gravel at well no. 3 would respond more quickly to wet years than the fine material of the Haskell wells.

Q There is only 1.8 feet difference.

A On a previous occasion you showed more discrepancy--

Q I showed that the effect of pumping was more serious on well no. 3 than it was on the Haskell well and that it dropped more as the result of pumping. But what has that got to do with well no. 3 standing at this date as it does, and you will find the same situation existing in other dates,

higher than the Haskell well, when it is closer to the outlet or declivity out of which the water is rushing?

A. It shows that it falls more rapidly when it is pumped and recovers more rapidly, and presumably there was more water coming down to the outlet than it would carry without backing up.

Mr. Britt: I have no disposition to interrogate this witness about these elevations of wells except, first, to get some evidence into the record, and secondly to endeavor to get it into the mind of the Court what appears from the evidence as testified to here by the witness relative to the Haskell well as compared with the well no. 3; and not that I expected to convince Mr. Finkle, but more to fix the attention of the Court upon the subject, and upon which I expect to have the privilege of returning when the case is orally argued.

Mr Goodcell Q You have given us various measurements and deductions to show that the fluctuation in the flow of the Cucamonga Springs had no correspondence with the change of head or the change of elevation of water, standing in well number 7, the Haskell well.

A Yes, I have.

Q And have shown those things to us as a reason for a conclusion that the Haskell well and the Springs do not derive their water from a common source, and are not in sympathy with each other.

A No, I don't think I showed it for that reason; I did that merely to negative the statement made by the experts for the plaintiff in this case that if the hydraulic head in those 16th street wells and Haskell wells was the same, that the springs would flow the same, they would flow the same as they would when the head was that way formerly. It was not for the purpose of drawing any deductions of my own on the subject, because I don't believe it throws much light on the subject; it was merely to negative that theory.

Q Is there any other well, or any other elevation of water in any well or tunnel, with which the fluctuations of the flow of the Cucamonga Springs do conform, as between which there is any such correspondence as you fail to find between the springs and well number 7?

A No, there is not; and I will state that from my understanding of the geology, and the hydrographic conditions of the country that it would be impossible to find such a well or tunnel, because instead of being fed by a plane of saturation or a reservoir, as was assumed by those who advanced

that theory, the Cucamonga Springs are really fed by a multiplicityof veins or old channels, and that it would be impossible in my judgment, to find the hydraulic head on any one channel or vein which would bear any relation to those springs, because they are fed through a long range of territory, and through a multiplicity of channels, which is very different from the assumption that they are fed from a saturated plane of a reservoir, through a connection.

Mr Waters, Q I have penned up my admiration for this picture long enough to ask you on what hypothesis of fact in this case do you extend this red champlain formation, which lies immediately under your late quaternary, recent formation, at its upper lip, higher than the plane of pressure in old alluvium?

A. This diagram is made on the assumption that the old alluvium extends further up than the plane of pressure in the old alluvium; the plane of pressure was merely placed there, to show what the present supply of water would bring the pressure plane to; I didn't mean to say for a minute that I know where the plane of pressure is in the old alluvium at that point, and the plane of pressure which I have indicated is merely hypothetical; now, my opinion is that the old alluvium extends up above where I show the Champlain deposit, and probably does extend in a line which I will draw in pencil.

Q Mark it AB.

A I will mark that pencil line AB, one at each end of it; and the pressure may have been sustained to the limits of the old alluvium, depending on the quantity of water which is

being supplied. and I merely drew the hypothetical line, and terminated the ducts or veins at that point, as an illustration of what might occur, that plane of pressure being a variable quantity which may move up and down, depending on the supply of water from the watershed above which would filter in from the bed above it.

(Question beginning on line 10, previous page, read to witness)

Q Now, will you answer that question?

Mr McKinley: We submit the question has been fully answered.

The Court: I confess if the question was propounded to me I wouldn't know what further to say.

Q All right; now, between the two lines, AB and the next line marked plane of pressure in old alluvium, what have you? New detritus?

A No; old alluvium.

Q And as we now understand you there is old alluvium above the line of pressure in old alluvium: Now, what is the difference in that alluvium, one of which has pressure on it and the other has not?

A That merely depends on whether the water supply is sufficient to fill it to a higher point; I have drawn hypothetically the blue line marked plane of pressure in old alluvium, and that after dry years might be lower than it is now, if the supply is insufficient to keep it up to that point; after wet years it might raise to the line AB, and it might refuse to take any more water, if the supply were so great as to leave a sufficient quantity for the discharge at the Red Hills, and still maintain that head.

Q Now, Mr Finkle, is it not a fact, that prior to me asking

you the first question which I did, that you had the new detritus depicted on this diagram lying toward the mountain from the red line down to the line of pressure, just as you had the detritus inside the bowl? Are you not now placing your old alluvium at a higher elevation than you had it before?

A No, sir; that line was described there as plane of pressure in old alluvium and nothing else, and did not mean anything else.

Q You have marked with the blue pencil for the new detritus, haven't you?

A Under the plane of saturation I have marked it with the blue pencil; above I have not.

Q Above you have marked it winged with blue and some yellow.

A I have shaded it light and marked in the yellow title, lighter coloring above plane of saturation, which of course refers to the plane of saturation in both the alluviums.

Q Are you through?

A I am through.

Q Well, then I will ask another question.

I want to know and have you point out to the Court, what is the difference in the marking of the substance in the bowl, and also the substance outside of the bowl, above the line marked plane of pressure: What is the difference in the marking of those?

A Only the lighter coloring, as the title states.

Q Isn't the lighter coloring in the bowl as well as outside of it?

A It is; I made no distinction between the lighter coloring

in the two formations.

Q Is there outside of the bowl, between that and the mountainboth old alluvium and new detritus or not?

A Between what point outside of the bowl?

Q Can't you see on your own map?

A Do you mean between the line -

Q Between the red stratum marked Champlain formation, extending up to the surface from the top of such red mark is there not new detritus and old alluvium, between there and the mountain?

A Well, this was the limit of the old alluvium that I intended to show, because that belongs to the older formation than the recent; everything above where the letter B ends, I intended to represent as recent alluvium; as you see it is a little different with the lozenges in it, whereas the other is a solid body of tinting; you notice above the line AB there are yellow lozenges, which represent yellow clay or silt lozenges in it.

Q What line of demarcation did you have on this map above the line markedplane of pressure in old alluvium, what line of demarcation did you have there, as between the new and the old alluvium, where they joined each other?

A It was not a line; you will observe that the upper part has been shown with lozenges, in lozenge or kidney form extending through the recent alluvium while in this part there are none of the lozenges; I did not make a line there because undoubtedly the demarcation is not on a line, but owing to the erosion and the complex operations of the water the demarcation ir probably a zone instead of a straight

line or line of any kind.

Q Then you don't wish us to understand that there was a stratum of the Champlain formation which extended up in elevation above the balance of the old alluvium?

A No, I just wish you to understand the contrary, that it extended only as far as the oldalluvium; that is why I made the distinction in drawing the two formations.

Q Why didn't you color the old alluvium yellow to where you claim the old alluvium to come?

A I have colored it lighter and my title explains itself; the color is yellow above there but a much lighter shade.

Q Do you mean to say that is any more yellow than the part to the south of that line?

A No, as compared with the portion below plane of pressure in old alluvium it is lighter.

Q Didn't you wish to be understood and read in your diagram, that above the line marked plane of pressure didn't you mean to mark that and didn't you mark it just the same as inside the bowl?

A No, sir.

Q Didn't you intend to mark it the same as that inside the bowl, marked, above plane of saturation in recent gravels?

A No, sir; it is not marked that way; there are lozenges in the upper, and uniform coloring in the lower.

Q You have assumed in the stratum, Champlain formation, you have assumed it to be impervious?

A Impervious to the circulation of water.

Q You are assuming that that is as tight as an iron pot?

A No, sir; only as impervious as clay and silt.

Q You are assuming no cracks or crevices or holes, by which the water underneath is connected with the water inside of the bowl?

A I have assumed that to be a fact.

Q I would like to know whether you have any such data, upon which to make such an assumption?

A I have my knowledge of geology on which to make that assumption.

Q That is what you assume it on?

A That knowledge is like any other scientific knowledge, the same as we know that water is composed of two parts of hydrogen and one part of oxygen, and is only a scientific knowledge, which we acquire from our professional investigations and learning on the subject. A stratum deposited under still water is ~~found~~ bound to be so compact as to prevent the circulation of water through it.

Q If it is left undisturbed.

A Except by folding.

Q Do you think that has been left undisturbed?

A Except by folding, and the deposition from the settling due to the deposition of the other and later deposit over it.

Q Do you mean to say the mountain raises up with this?

A Yes, sir; and carried that up with it.

Q And there was pressure on the sides?

A Yes, sir; lateral pressure; it was not vertical pressure that raised the mountains. It was lateral pressure applied both ways to wrinkle the surfaces together.

Q Was that gradual.

A Yes, sir; that was gradual.

Q This stratification was all formed before that curving together, or during the time? Did the two processes go on together?

A The pleistocene had formed before that folding began. and the recent was forming while the folding was in progress.

Mr Haskell, Q You refer now to this fold right here?

A I am referring to both folds, the fold in the main range as well as in the Red Hill.

Mr Waters, Q You say this folding was made after all this stratification which you have marked here in the yellow, and the blue and the red, which lies in the recent, this folding all occurred after that stratification was formed?

A Yes, sir.

Q And as that folding took place it had a crushing effect upon this upper layer?

A A compressive strain - compression on the inside.

Q As you went to the others what would that be? expansion?

A It would become tension on the outside.

Q Tension on the outside ones, and compression on the inner ones?

A Yes, sir.

Q Even though they were formed of impervious material to start with, and water would not go through, do you mean to say that the pressure has been uniform throughout the whole longitudinal length of this fold, and that there has not been places where it was folded more, some by compression and others by expansion, by unevenness of the bottom of the trough, or has it all been gradual?

A It has all been very gradual; while the folding was in

progress the upper or later quaternary deposit was being formed, and the amount of folding which any stratum would sustain from the lateral pressure would ofcourse as a proposition of mechanics , assuming the force to be equal, be entirely dependent on the thickness and strength of the stratum being folded or bent.

Q If that is so, how would it be? In a dry or wet state?

A Oh, that was wet when it was folded.

Q The water was filling all the voids of the stratification?

A It had water in all of the veins, and the clay was undoubtedly saturated, but not water moving through it.

Q In this crushing did it disintegrate that stratification at all, and water would get started through there, and it would keep on going through there and keep those pores open.

A Yes, but your disintegration could not occur on the inner edge of the curve.

Q Why not?

A Because if you fold anything that way you would fold it and make it tighter.

Q Do you mean to say it makes it harder?

A It makes it more compact; if you take some clay and fold it that way it will make it more compact.

Q If it is all as wet as can be, and water standing at an elevation of 100 feet above it, and that pressure of water of 100 feet on it, do you mean to say if there are cracks or crevices or openings made there, that the water won't keep them open?

A But the crevices would be made downward; the fractures would be made on the under side.

Q. Do you mean to say if you take a chunk of clay and compress it in a bucket of water, and get it all soaked up as much as it will soak, do you mean to say, and I want your opinion one way or the other on it, do you mean to say that you won't have water in it? Do you mean to say you can squeeze all the water out of it and make it as compact as a brick?

A. I didn't mean that; I do mean the strata were so thick that water could not circulate through them, and therefore the bending of the strata could not let the water out, particularly not on the inside of the curve, but it might cause a slight opening of the clay, on the apex of the curve, which would cause water to appear, as I have shown on the Red Hill, where the effect of the folding would be to stretch the formation.

Q. And you are assuming up here where we are talking about it, that there is no possibility of any condition that looks toward the escaping of the water out of the lower stratification into the newer fold,- there I understand you there is nothing of that kind, but it is all as tight as a drum, as far as any circulating water is concerned, is that it?

A. That is it, because I am basing my conclusions on mechanics and science and facts, and not going on assumptions contrary to those things.

Q. Where you have the outlet, you have as much difference as may be necessary, to let it come out where you want it to come out?

A. I dislike to have you insinuate anything of the kind; you and I are good friends, Mr. Waters.

Q Haven't you got it that way?

A What you say is an insinuation, because I have followed the rules of mechanics and geology in everything I have said.

Q I understand you to say that the Cucamonga Springs appeared on top, away up here, I understand you to say that is nearly because there is a crack up there at the top of the stratification.

A That is true; that is part of the explanation for the appearance of the Springs.

Q Further to the west, about half a mile, you have your out-let at a depression how much below that in point of level?

A We don't know how deep it is. Wells have not been bored deep enough to find out; it must be 200 feet or more, because the Tourwine shaft is at least that deep.

Q Are we to understand you, within a distance of half a mile, instead of this being a level trough it has a difference in level on its bottom of at least 200 feet.

A I don't know anything about the bottom; I thought you were speaking of the anticlinal.

Q I am talking about the anticline which is under what you term the out-let toward the west?

A That is the anticline, the same anticline, only lower.

Q Do you mean to say that the whole of it is a thing of such even bottom as that this crushing is absolutely uniform?

A No, I don't think it is ever absolutely uniform; the summit would not have been exactly level all along; a mountain range is never level along its summit, because the resistance may vary.

Q This is the syncline down here?

A Yes, sir.

Q The anticline may have a saw-tooth edge to it measured along the length of it, but the syncline is as smooth as the bottom of a horse trough?

A I wouldn't say that smooth, because the formation was not laid down smooth probably; I suppose the bottom was always undulating.

Q If one is fractured in this process of uplifting, why not the other?

A Because in applying the pressure laterally the portion which moves upward is the anticline; the synclinal does not move upward; if there is any movement at all it is slightly downward. When you apply the pressure to the anticline, the higher that anticlinal arose the more will be the angular fold, and therefore the greater will be the tendency to separate and make porous the strata; and if you consider the out-let to the west in relation to this, which is several hundred feet lower as you say, and which I believe is correct, the fold on that would be much flatter than this, and the tendency to create fractures would not be so great; and then there is the factor of denudation; the top has been denuded, and part of the covering has been taken off.

Q I am trying to get you to focus your mind, if you will oblige me by so doing, by looking at the trough from the other side. Look at the side instead of the end. Now, do you understand me? I am trying to draw your attention to the side instead of the end.

A No, I don't understand that.

Q I am now proposing to ask you a question with that view of the basin before us. Do you mean to say that that basin for its whole length easterly and westerly, we will so assume that it lies in that direction, do you mean to say that the fold on the bottom is absolutely unniform and level, or even an even grade? May there not be places in it where the same sort of a crack or fracture may occur as occurs in the Cucamonga S prings?

A No, that kind of a crack never occurred, because the folding is in the other direction; instead of being a stretching of the material, there is a compressing of the material.

Q Do you mean to say that there cannot occur physically a less compression, looked at from the other side of the trough, so that one part of the bottom of the trough might be pressed up higher and another lower, so as to fracture the bottom? Can't you imagine such a thing as that existing?

A I don't think you can imagine anything of the kind. I think that would be doing violence to the principles on which these things are determined, because your compression is lateral and not in the other direction, longitudinally. These ~~terranes~~ terrenes were formed by lateral pressure, and the lateral pressure was exerted from each side toward the center of these two anticlinals. If the pressure were exerted in the other direction the very thing you say would occur.

Q Do you mean to say that it is physically impossible for the pressure to come from the other way too?

A The impossibility is absolutely physical down in the bottom of the bowlwhen the pressure is applied from each side;

if you had a composite pressure, a pressure from each side and also longitudinally and transversely in the channel, then the thing you say might occur; but in this case it could not occur.

Q Do you mean tosay it is an impossibility for there to have been any unevenness on the upper side of this part of this red stratum? You have marked it all as being an absolute smooth affair: Might not there have been unevenness there?

A I am quite sure that the bottom of the body of fresh water in which this was formed was uneven; and I am also quite sure that when the bottom was in its original condition before it was ever folded at all that it had undulating surfaces, because I never knew of a lake, unless it had been inexistence a long time, and even then it is not probable that the lake would have a perfectly even bottom. But I am at a loss to see how that fact could have any effect on the problem we have here, because here we have the problem of folding a stratified or stream-laid material by lateral pressure applied at both sides, and that would cause a settling of the synclinal and an elevation of the anticlinal, just as the paper I am holding, and would not cause any fractures across the bottom.

Q Haven't we understood you to say that these stratifications in the old alluvium is made up of an interlaced lot of finer and coarser material?

A It is made up of those coarse channels, and cpmpacted clays and silts which surround those channels.

Q Do you mean to say that it is an absolutely homogenous mass, such as the mortar in the brick or mud in the brick?

A No, sir, I never meant to say that.

Q You don't mean to say that this tratum on top is anything more than the settling of water?

A I mean to say it is the fine sediments and clays which settle in water.

Q And it did not get its compactness nor hardness until it was overlaid by the later deposit?

A I think standing in water would give it compactness, because the pressure would be in proportion to the depth of the water.

Q Do you mean to say that it stood in a lake with some depth of water over it?

A Undoubtedly that lake stood with water in it; I have testified to that already.

Q And it laid flat?

A It then conformed to the bottom of the lake and was comparatively flat; that was before it was bent.

Q Then you do not subscribe to the theory that this rose up gradually and was filled up gradually by the newer detritus?

A I do; but as I say, while the Champlain deposit was made, it was a lake; and when the close of the Champlain period came, and the progressive uplift occurred, then the late quaternary began in the upper end, and encroached on the lake until it was finally filled up after the formation was lifted up to its present level.

Mr. Haskell: Q As I understand you to state today to Mr. Waters, and also to Mr. Britt, that when this ancient alluvium

was laid down it was laid down flat, and the fold came afterwards?

A Well, I don't believe the ancient alluvium was absolutely flat. I believe there might have been a fault line in the deeper rocks, as I stated the other day, which might make a very slight depression there; if so, this ancient alluvium would cover it over eventually.

Q I will read to you your testimony in this case in regard to that on page 4467, beginning with line 4:

"Q As I understand your theory of the formation of the Cucamonga plain in a geological sense was, that the mountains some time existed at about half the elevation they are now, and at that time there was no uplift or fold as shown on defendants' exhibit Q?"

"A Well, I think you have confounded my testimony slightly with Mr. Trask's. I stated in mine that I believed there was a fault along there which had made some uplift before that period, because the evidence of geological activity in this region is that these mountains first appeared in the latter part of the tertiary age; and unquestionably when they appeared they made a fault or fracture somewhat along the general course of the present Red Hill, and I think all subsequent movements have been along that same line, and I believe that there was something of a fold at that time of older rock in that vicinity".

A I believe that now, just as I stated.

Q Did you so testify?

A I did; and that is what I believe, that there was a fold there, a fault there, but not so high as the present one,

and all movements since that time have been along that same fold and fault line.

Q And then I directly called your attention to sections ~~as~~ A and B.

A I remember that.

Q And you said there was a fold there at that time?

A There was.

Q When this igneous rock was there, and when this ancient alluvium was laid down, there was still a fold?

A What I said was, that the first time the mountain range appeared that that fault line, or fold line, at the Red Hill, begun to form in my opinion, and undoubtedly has grown ever since the same as the mountains have grown.

Q And it had to grow faster than your lake grew, in order to have a lake?

A No, that is not what made the lake. The lake was made by the Santa Ana mountains, which are older, and by the Coast Range.

Q You think that fold had nothing to do with the lake?

A The lake was more extensive than that, and covered that fold completely.

Q You have said there was a progressive movement, with all the goings up and comings down of all the plains and mountains you have told about, that there was a progressive move along this fold?

A Yes, I said there was first an upward movement in the late tertiary, ~~when in the old alluvium,~~ and then there was a downward movement of the Champlain period, and after the Champlain period there was an upward movement. And if you

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read Dana a little further on, then you did the other day, you would have deen it. He lays the general principle down, and if you had read the whole paragraph you would have had it all in this record.

Q While the progression of the fold was going on it was building up behind, wasn't it?

A The old alluvium was, yes.

Q And it didn't come up in the shape of exhibit Z-16, and it did not cross the fold as long as the fold was higher than the plain itself -- isn't that true?

A No, that is not true. You are mixing up geological ages.

Q I am talking about the fold.

A Well, talk about one period at a time. Don't mix up three or four geological periods in one. You will be lost if you do that.

Mr. Britt: Q Why is it so much thicker over the peak of the fold than anywhere else?

Mr. McKinley: I think one counsel at a time should cross-examine the witness.

Mr. Haskell: Well, I will ask that question.

A Well, I will answer Mr. Haskell's first question first. The first question by Mr. Haskell relates to the upward movement of this fold. Now, as a geological fact, when the first uplift occurred which made the first Sierra Madre range, there was also a slight faulting uplift along the general axis where the present Red Hill is; and that when it came up was coincident with the deposit of the ancient alluvimm. When the ancient alluvium was formed, it covered that over, because of the very slight character of that fold. Then we

had the next geological period, the Champlain, which was a complete subsidence of the whole thing.

Q Of the fold?

A Of everything.

Q Of the fold, now?

A The whole mountain range, and this secondary fold with it, as a whole, subsided several thousand feet. Now, during that subsidence, this fold simply assumed a lower level, and I want it understood in speaking of that it was just insipient and very small compared to what it is now, as the difference in elevation has ~~been~~ [illegible] two or three thousand feet since that period. After that subsidence had occurred and the large lake formation in the Champlain came into existence, the Champlain deposit was laid down, but the inequality of that fold had been covered by the ancient alluvium, and that covered the entire bottom. Now, when the Champlain period was completed, the second uplift commenced. And that second uplift elevated the mountain range not only as high as it was before, but somewhere between two or three thousand feet higher. It also raised this fold here; that fold had been two or three thousand feet lower than it is today, or in other words, if you subtract the thickness of these alluviums and the pliocene below that, that fold would be that much lower, but the reelevation of them due to lateral pressure, and aided by the pressure of the water, helping to lif this clay higher and higher, caused the present form to appear, -- if you don't confound the periods. Remember that this fold at the beginning at the Red hill was very small, and that it grew nothing during the Champlain, but that its

recent growth of two to four thousand feet, which is difficult to state exactly, has all occurred since the Champlain period.

Q Now, I want to give you one more chance to explain something else. Do you remember that you put in a diagram here showing what you considered to be the approximate formation around Well No. 7, going down several hundred feet, and you had represented in that lozenges, I think you call it, of clay, that you say were washed off the Red Hill. Now of course if that was washed off the Red hill, the Red Hill had to be higher than this fill, and I suppose you think the water was washing off came around through your westerly channel. Now, in all that eating process that carried that out, why couldn't it eat a hole on the north side of that hill so as to make an opening and a spring there on that side, inmt carrying your red clay to the north?

A The best answer to that is for you, the next time you take the Santa Fe Railroad to Los Angeles, to look at the gulches running down on the south side of the Red Hill which are washing down that hill today, and see whether they are deep enough to cause any springs to break out there. I assume that the same operation was going on on the north side, that those small gulches were forming and washing that denuded material down into the basin or pocket and there mingling with it silts and sands of the recent deposit. That those gulches, owing to the limited watershed there would be the same as they are today, and would be so small that they would not go down deep enough to form any springs.

Q They did on the south side: Why not on the north side?

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If they did cut it down on the south side, why doesn't the water on the north side act like the water coming out on the south side of the Red Hills, even according to your theory?

A In the first place, what made the gorge at the Cucamonga Springs so deep was not the watershed of the Red Hills, but the flood flow from the mountains, and when that gorge was cut, being the deeper incision in the hill, naturally the water would rise there. On the west side of the Red Hills, the same way; when the flood waters had made the gorge between the small and the large Red Hill, that was the weakest point in the stratum, and water following ~~its th~~ its well-known law, would naturally emerge at the weakest point in the stratum when it is under pressure. That is exactly what we have observed all the time at the Cucamonga Springs.

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Here the court takes a recess until tomorrow, April 15th 1909, at 10 o'clock a.m.

-o-

J. BENJAMIN
OFFICIAL REPORTER
SUPERIOR COURT

J. W. McKinley

IN THE

Superior Court

OF THE

County of San Bernardino

State of California

Cucamonga Vineyard Co et al

Plaintiff

vs.

San Antonio Water Co et al

Defendant

April 15, 1909

Vol. 53

Index

I. BENJAMIN, Official Reporter

Thursday, April 15th, 1909. Fifty-third day.

B. C. SHEPHERD.

B. C. Shepherd, heretofore sworn and examined, being recalled fork further cross-examination, testified as follows:

Cross Examination.

Mr. Britt: Q As I remember there was not very much that I desired to ask Mr Shepherd. I think I asked him about obtaining the time of installation of the several pumping plants for the purpose of pumping wells, and he could not give us the dates of all of them, but said he would ascertain by reference to the records of the company.

A Mr. Britt, I could not locate the exact date that each one of those pumping plants were installed; but I do know that there were four of them that were installed immediately after the wells were finished, probably in 1901 and 1902.

Q The well No. 1 was not put into commission, as Mr. Leak's testimony was, for a year or two after the well was bored?

A Yes, I investigated that, and I find that that particular plant was put in in 1904, but all of the others, one or two years previous to that time.

Q What time in 1904?

A It was in the summer of 1904, about August, I think.

Q The record shows that the San Antonio Water Company's well No.1 began to be pumped September 20th, 1904: Do you think that it was not pumped previous to that?

A I think not. I think that was the time the pumping plant was installed.

Mr. McKinley: That is, No. 1 as shown by the present numbering?

Mr. Britt: Yes.

Mr. McKinley: Because No.3 was called No. 1 also at one time.

Q You are unable to state the time of the installation of the other plants?

A Nothing except that I remember quite distinctly that the plants were put in immediately after the wells were drilled.

Q Have you the Ontario Power Company's minute book here in Court?

A Yes, sir.

Q Produce it, please. There was a contract in this book which I desired to put a few additional questions to Mr . Shepherd, but I am not able to cite it immediately.

Mr. McKinley: Probably Mr. Shepherd can find it.

Mr. Britt: It was a contract which was read from the last time Mr. Shepherd was on the stand and near the close of his testimony, a contract between the Ontario Power Company, as I remember it,-- no, it was not the Ontario Power Company -- Yes, I think it was the Ontario Power Company, and one of these electric companies doing business in the neighborhood of Ontario, about the San Antonio Canyon, but having its head quarters in San Francisco. What was the name of that concern? Was it the Sierra Power Company?

A There is a company of that name which has a power plant in the San Antonio Canyon. That is a subsidiary of the Pacific Light and Power Company of Los Angeles.

Q I am unable to cite it here immediately, and I will forego those questions for the present.

A If you tell me what the contract was about, perhaps I can

find it.

Q It contained some provision relative to a delay of two years in the performance of some provision of the contract that apparently was inserted for the benefit of the San Antonio Water Company. Attention was called to the matter at the time the contract was produced here. Some portions of it were read, and the question relative to that provision of the contract was put, and an objection to it was sustained by the court, and I desire to return to the subject. But I don't see it now, and I will forego and not prosecute the matter further. If I am not able to find it, it is a matter of not very great importance and it will not be touched upon at all. That is all, Mr. Shepherd.

Re-Direct Examination.

Mr. McKinley: Q Have you a lot of bills for pumping in '99?

A Yes, sir.

Q Produce them. Will you state whether these are bills paid by the San Antonio Water Company for pumping one of the wells?

A Yes, sir.

Q Which well was it?

A This first bill is for pumping both at 22nd and 16th Street wells.

Q What well was being pumped that year? What 16th Street well would it cover?

A It would be No. 3.

Q Is that so with all those bills there?

A The next bill is for pumping from February 15 to March 15; while the bill itself does not show on its face where the

pumping was done, I am pretty sure it was at 16th Street. The next bill is--

Mr. Britt: Before the contents of the bills are stated I would like to have a sight of them.

Q Yes. Look over them and state whether they relate to well no. 3?

A They relate to well no. 3. The bill in June states that the 16th Street well. The July bill doesn't make any statement In July it states that it is 16th Street well.
The September bill states that it is at 16th Street well.
The October bill doesn't make any statement on its face as to where it wasx.

Q What does it relate to?

A It relates to pumping.

Q Of what well?

A No. 3 well. And there is a bill here, the last one that I could find, was in December for eight days running the pumping plant at 16th Street well.

Mr. McKinley: We offer those in evidence

(Bills for Pumping)

Mr. Stevens: We object to the introduction in evidence of these bills on the ground that they are irrelevant, immaterial and incompetent and hearsay, self serving declarations, if they serve any purpose whatever

Mr. McKinley: It is identifying times and dates when they paid money for pumping wells.

The Court: Are the bills receipted?

Mr. McKinley: I don't know whether they are recipted or not.

Mr. Stevens. They could only be offered in evidence for the purpose of proving the fact of pumping. I don't understand that they would be admissible in evidance to prove that collateral fact. They might be offered for the purpose of refreshing the recollection of someone who had to do with the transaction in the paper offered.

The Court: I presume they are offered in support of their plea of estoppel, to show expenditures made.

Mr. Stevens: I don't see how pumping expenses could be relidd upon.

Mr. McKinley: They are bills simply showing that they are for pumping at the various dates shown here.

The Court: What do you offerx them for? As evidence of expenditures?

Mr. McKinley: No; I offer them as simply identifying dates at which the bills were rendered for that service.

The Court. I don't suppose they are proof of that fact.

Mr. McKinley: Very well; I will withdraw the offer.

Mr. Britt: If Mr. Klaffert, in whose favor the bills seem to have been rendered were produced, his testimony might be interesting.

Mr. McKinley: Yes; I suppose so; but I don't know where to find him and I think I have some other methods by which I can ascertain some of the facts.

Q Were these papers in your hands and custody as secretary?

A Yes, sir.

Q Have you made any notation on them.?

A Yes, sir.

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A Yes, sir.

Q State whether by examination of your notations on those papers you are able to refresh your recollection as to the matter of pumping during the year '99 of well no. 3.

The Court: The date when the notations were made might be of some importance.

Q When were the notations made?

A Made at the time these bills were made out/

Mr. Pritt: Which notations do you refer to? Which are in your handwriting?

A There is "check no. 1965." That is the number of the check which paid the bill. The word "pumping expense $90" is also in my handwriting, which shows that the money was paid for pumping/

Mr. McKinley: Refreshing your recollection from the memoranda in your hand, will you state during what times in the year 1899 the well no. 3 was pumped?

Mr. Pritt: Objected to on the ground that the question is incompetent and that it xxxx xxx is not the proper way to make proof of events not in the recollection of the witness. The witness may refresh his memory by entries or reference to entries made by himself or under his direction at a time when the event was fresh in his mind. But the question here does not ask the witness to describe the event. His memory being thus refreshed.

The Court. I suppose the most you could claim for it is that i might be used as a memorandum to refresh the witness's memory as to the approximate time of the actual payment.

Mr McKinley: If it refreshes his memory to any extent, he

is entitled to use it.

Mr. Britt: That is very true; but it would require an additional element; it might have been made in the course of business or it might have been made without any particular relation to the time of the act.

Q. I will ask you, Mr. Shepherd, will you state whether from an examination of the entries you have made upon those papers which, I understand you, were made at or near the time the bills were presented, you are able to recollect the dates when well no. 3 was pumped during the year '99?

Mr. Britt: Objected to because there isn't anything in the entry which at all relates to the pumping of no. 3 in 1899. It is a mere charge made and contains no statement about the pumping of any well in 1899 or any other time.

The Court: I don't understand that it has got to show a relation. I suppose if a man has a memorandum in his pocket ~~that~~ book that on a certain day he sewed on buttons, it might refresh his recollection that he had been away from home fishing.

Mr. Britt: I think it should appear that he has a recollection of the pumping of well no. 3 in '99, and the question is directed now simply to the matter of dates. It does not appear that he has a recollection of the day or dates when it was pumped, nor that it was pumped at all.

Mr. McKinley: That is what I am asking him,-- whether from the papers his recollection is refreshed

The Court: Answer the question. Plaintiffs except.

A Yes, I remember, after looking at these papers,-- I remember that that well was pumped in '99 at these different

dates.

Q State at what times it was pumped during that year?

A Running from some time in January right on through the summer up to the month of December.

Re-Cross Examination.

Mr. Britt: Q Did you see it pumping at that time?

A Yes, sir; I did.

Q When was your memory refreshed to the extent that you are able to make that statement?

A From an examination of these accounts and also from the fact that I know that that well was pumped before it was drilled. That is, before it was drilled by the San Antonio Water Company; and my recollection is that it was drilled by the San Antonio Water Company after this date.

Q Mr. Shepherd, do you know Thomas George Klaffert, named in these bills to which you have referred for the purpose of refreshing your memory?

A I knew him very well at the time he was pumping those wells.

Q Do you know where he is?

A I don't know; I haven't seen him for a great many years--several years.

Q Where did he live when you last saw him or knew him?

A He was living at Ontario.

Q Do you know whether he lives there yet?

A No; he doesn't live there now. He moved away and I don't know where he went to.

Q Has he any friends or relatives to your knowledge in Ontario?

A Not to my knowledge.

Q Was he a married man or single ?

A I think he was a single man at that time.

Q What work was he doing for the San Antonio Water Company? Do you recall the particular species of work?

xx It is mentioned here that he was an engineer on the 22nd Street and 18th Street. Now what were the several engineering plants? What kinds of business was he attending to?

A His principal business was to run the pumping plants. He was a very good mechanic, and I remember when anything would go wrong at any of the other plants, we would usually send him to look after the thing and straighten it out, being a better mechanic than most of the other men that we had there in our employ.

Q How many pumping plants did he have supervision of in that way.?

A The pincipal plant that he was at, according to my recollection, was the 18th Street. I also think that he fitted up the pump and ran it for a short time at 22nd Street, to get it going.

Q Where is the 22nd Street plant?

A It is out of existence at the present time.

Q What was it? A Bodenhamer well?

A It was about a quarter of a mile north of what is known as the Bodenhamer well.

Q Was it the Saunders well?

A No; it was not; it was a shaft that we sunk on the Bodenhamer property, and we put in a pump there to pump out water while we were sinking the shaft, and afterwards the shaft

was abandoned. It didn't produce much water

Q Were there any shafts put down in a similar manner by the San Antonio Water Company about the same time near the 16th Street well or in that direction.-- between the 16th Street well and Upland?

A No, I think not. I have no recollection of the San Antonio Water Company putting down a shaft.

Q Or anybody for the San Antonio Water Company?

A Not to my knowledge, excepting sinking the shafts for the 16th Street wells, getting them ready to drill. All those shafts were sunk before they were drilled.

Q Was this man Klaffert sinking any shafts at 16th Street for the well no. 2 or the well no. 4 or the well no. 5 about that time?

A No, sir; he was not.

Q Had the San Antonio Water Company any other plants which required the supervision of an engineer?

A I think not.

Q I notice that some of these bills mention night work: Was Klaffert employed both day and night for the purpose of running this pumping plant?

A My recollection is that when the pumping plants were running all right and were not having any trouble that they had--

Q That is not the question.

A I will answer the question yes; night and day.

Q I notice there is a bill there in October which seems to cover the same time that you paid Barlow for doing this same wrk: You paid Barlow from the middle of September to

the 13th of October?

Mr. McKinley: No; the Barlow bill was '98.

Q Well, that may be. So that Klaffert was the only engineer you had, for both day and night?

A Oh, we employed others occasionally to run nights.

Q Who were they?

A There is a bill here June 15, 1899, to L. Rabe, three days labor running engine 16th Street nights.

Q L. Rabe?

A Yes, sir.

Q Do you know that man.?

A Yes, sir.

Q Do you know where he is now?

A I think he lives in Ontario at the present time.

Q An engineer, is he?

A There are two brothers, and one of them is dead, but I think this is the one that is living.

Q Any others employed to run the engine nights?

A I think there were others from time to time. But I can't recall their names at the present time. And here is another: [illegible] McFatridge, 8 days as engineer running the 16th Street pumping plant, night shift.

Q At what time?

A This bill is December 15, 1899.

Q Do you know McFatridge?

A Yes, sir.

Q Where does he live.?

A I think he lives in Los Angeles.

Q Any others employed for night purposes?

A I can't recall any others just now but I think there were

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others from time to time put on for a short time at night.

Q Where did you find these bills to which you have been referringx for the purpose of refreshing your memory?

A On the files of the San Antonio Water Company along with all of the other bills-- monthly bills.

Q Do you know how it was that that happened to escape the destruction by fire which destroyed so many other records?

A Yes, sir; I know all about it.

Q How.?

A Because they were inside of the vault and the vault was not burned up.

The Court: Just when was this fire that we have heard so much about?

A November, 1905.

Mr. Haskell:

I would like a stipulation from all parties to this effect: That the rainfall for 1908-09 up to the present time is as follows:

For the month of January, .05 of an inch; August, .05 of an inch; September, 1.11 inches; October, 1.55 inches. November, .26 of an inch. December, .66 of an inch; January, 7.49 inches; February, 3.76 inches; March, 2.29 inches, as shown by the seasonal rainfall for San Bernardino, California, taken by Dr. Johnson.

Mr. McKinley: That is agreeable.

Mr. Britt: Plaintiffs agree.

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W. T. LAMB.

W. T. LAMB, heretofore sworn and examined, being recalled by defendants, testified as follows:

Direct Examination.

Mr. McKinley: Q Will you state what wells were pumped during the year 1902?

A 1902 was a dry year and we pumped everything we could that year. We pumped all the wells on 16th Street with the exception of no. 1. No. 1 was drilled, but it was not equipped.

Q What wells were those. Just enumerate them.

A 2, 3, 4, 5, 7 and 8.

Q What amount of water did you take from them?

A 70 to 80 inches. Some of the wells pumped a little more and some a little less than the others.

The Court: Q You mean 70 to 80 inches in the aggregate?

A No; each.

Mr. McKinley: Q Can you make any other differentiation between them than that?

A The two Haskell wells pumped-- they ran from 80 to 90 inches each, and the other wells ran about 70 inches.

Q About how continuous was the pumping during that season?

A We pumped practically continuously during the season. I remember it was a year of great distress for water and we pumped very late into the season. We pumped through the fall and into the winter.

Q What use was made of the water?

A It was used for irrigation and domestic purposes in the Ontario colony.

Cross Examination.

Mr. Britt: Q Was there any record kept of the pumping of those wells in 1902?

A I don't remember. I don't think we had any general record in 1902.

Q Either of water received discharged from the wells or water recived through the pipe line at Ontario from that source.?

A There were measurements made through the summer of the well pumping by Mr. Saunders the engineer, but I fail to find his measurements, and I fancy they were burned.

Q You say that you pumped through the season wells 2, 3, 4 7 and 8?

A Yes, sir.

Mr. McKinley: 5 also?

A Well, we pumped 5 to irrigate the Rubio Ranch, as it is called.

Mr. Britt: Q You mean 6, don't you.

A Yes; no. 6; that is right.

Mr. McKinley: Q What about 5?

A 5 was pumped that year.

Mr. Britt: Q 7 and 8, you say, discharged some 80 or 90 inches each, or 70 or 80--

A Between 80 and 90, if I remember right .

Q That would be for those two approximately 170 inches--twice 85. And the other four about how much?

A Between 60 and 70

Q Well, say 65? That would be 260, and 185 is 445 inches through that season. Do you think you got that much water?

A We got all the wells could afford. I remember we pumped

very strenuously..

The Court: Q Did you pump day and night that summer?

A Yes, sir; day and night.

Mr. Britt: Mr. Trask's estimate here at page 2716 of the record was 360 inches through that season. Did you furnish Mr. Trask a statement of the amount pumped that year.?

A I have a memorandum that I made a long time ago.

Q A memorandum made when.?

A Somewhere near the beginning of this suit.

Q What is this memorandum.? A statement of water pumped in successive years?

A No; it is a general memorandum of water pumped in different years. It is a very fragmentary memorandum. I think the number of inches pumped from those wells is approximately correct.

Q What have you in your memorandum on the subject?

A I have summer 1901 well 16th street nos. 2, 4, 5 and 1--

Q In 1901 No. 1 had not been bored, had it?

A I think it had. It had been bored and remained unequipped for several years.

Q What does your memorandum show about those wells in 1901?

A That is all it states about that.

Q Just the enumeration of 2, 4, 5 and 1?

A Yes.

Q And nothing else? What does your memorandum show in 1902?

A In 1902 we pumped wells nos. 2, 3, 4, 7 and 8. 5 is not on this memorandum. We pumped 70 inches from 16th Street

well no. 4.

Q All right. What else?

A The water was turned into the general system of the San Antonio Water Company and used on the Ontario Colony land south of 14th Street. That is all that is referred to as far as the summer of 1902 is concerned.

Q Those are the entire contents of your memorandum for 1902?

A Yes, sir.

Q What have you for 1903?

A Nothing on this memorandum.

Q Any dates on that memorandum?

A No dates in 1903.

I have dates referring to the pumping in 1898 and '99 and 1900. the summer of 1900, beginning in May. My recollection is it pumped 110 inches of water from Haskell well no. 7.

Q Is that all?

A That is all of that. In the summer of 1900 we drilled Haskell well no. 8. In the summer of 1901 we pumped 71 inches of water from the Haskell well no. 8

Q Did you pump any from no. 7 that year?

A I haven't a memorandum here and I am not sure about that.

Q Do you know from what sources you made up that memorandum?

A Principally from the minutes of the office and the records and from memory, principally.

Q From what minutes did you make those entries concerning pumping in 1902?

A I don't remember. I think it was principally from memory.

Q Will you allow me to see those entries relating to the

pumping in 1902? I see this is a type-written memorandum to which you refer. Did you type-write it?

A No; I had it type written in my office.

Q And you dictated it?

A No; it was type-written from a pencil memorandum.

Q The only part of this type-written memorandum relating to the quantity pumped is 70 inches from 1[illegible]th Street no. 4, 1902. Then in pencil I see "pumped wells no. 2, 3, 4, 7 and 8. When did you make that pencil memorandum?

A Some time ago; I don't remember.

Q Was it the ~~xxx~~ same time as the type written memorandum?

A I am not sure about that.

Q The statement made as to the quantity pumped rests solely on that memorandum, does it?

A I am not sure about that. I made this memorandum shortly after the suit began and I don't remember exactly my sources of information.

Q There is nothing on that memorandum about the quantity of water pumped from any of the wells (I am speaking of the type written memorandum)-- nothing on that except a statement that 70 inches were pumped from no. 4, is there?

A That is correct.

The Court: Q You have testified in one of the early years the Haskell well was producing about 90 inches: What year was that?

A The summer of 1900.

Q Did that refer to one or both wells?

A No. 7 pumped 110 inches.

Q Have you figures of the other well, or wasn't that pumped

at that time?

A No. In the summer of 1901 it pumped 71 inches from Haskell well no. 8.

Q Have you any figures there of the later productivity of the Haskell wells.?

A No; I have not.

Q Do you know independent of your memorandum whether they continued about the same, or increased, or diminished?

A When they were both being pumped they ran about 80 inches; somewhere between 75 and 80 inches.

Q What was the last season they were pumped?

A I think 1907 we pumped one of them and it ran something like 100 inches.

Q When did they first pump?

A No. 8 was pumped about May, 1901, the first pumping, and then it ran about 110 inches-- well, it ran over that in the beginning, but it settled down to 110 inches.

The Court: Q Can you say whether the wells continued about the same productivity each season, or about that much?

A Well, it was about the same proposition; they varied very little during the last several years.

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F. M. TRASK.

F. M. TRASK, heretofore sworn and examined, being recalled for further cross examination, testified as follows:

Cross Examination.

Mr. McKinley: We object to recalling Mr. Trask. Mr. Trask was examined all down the road and back and around and up and down and the matters must have been fully covered.

Mr. Britt: There are several questions relating to figures which appear in the record which I venture to think may be clerical errors, and they will take a very little while.

Mr. McKinley: I don't want to seem unfair, but we want some understanding that he will not be cross examined by three or four counsel representing the same interests.

Mr. Britt: I want to ask about some matters appearing on Exhibit P

The Court: I am disposed to let them crossexamine him; but I don't think I will let them cross examine him on Mr. Finkle's testimony as they did Mr. Finkle on Mr. Trask's testimony.

Mr. Britt: Q Let me call your attention to the map exhibit P, and inquire if the Mady Tunnel is not lain down there on this map entirely out of place. It is shown as projecting away up to the north of Base Line.

A I notice that on exhibit P that the word "Mady Tunnel" a are written so that the words rpoject above Base Line. But the tunnel is marked and shown by two dotted lines which are approximately on the 90-acre tract, extending only a

short distance above the northwest corner.

Q These marks do not indicate the tunnel?

A No; that is a road. The tunnel is approximately correct, as near as it could be by the scale.

Q And about these 16th Street wells, are not 7 and 8-- they are indicated entirely too far apart, according to the scale?

A I have already criticised that in the testimony. These were put on by a draughtsman in a hurry, and they are not correctly located, and the correct locations are found on exhibits D and E. These are not absolutely correct.

Q Wells 1 and 2 are indicated quite too close together?

A Well, that is a small scale and I haven't attempted to locate them to say that they were put on there accurately.

Mr. Stevens: Mr. Britt means with relation to the others.

A I would say from the appearance of these that they are not properly spaced, but only in a general way show the location, and that is all I had to do with this on this map.

Q Now, Mr. Trask, if you will take Volume 1 of the testimony, or probably you have your original notes--

A My notes are over in my room, Judge Britt. What do you refer to?

Q I refer to certain figures, elevations of wells.

A I will inquire whether that is the list Mr. Wright made out for you.

A There were three submitted by Mr. Wright.

A He submitted them to me and I can answer as to those, because I looked them up.

Q There is another which I want to inquire about, whether in each instance they correspond with your original notes.

A The three submitted by Mr. Wright I compared with my original notes and they are correct; and if you give me the other I will look it up. If I find it in error I will be glad to correct it.

Q I want to identify these three measurements.

A If you have the original paper, it has my check marks on it.

Q I will give you this so that we will have it right.

A I see that this is my original paper and it has my O.K. in pencil.

Q Appearing on page 90 in the table of elevations of water in wells, line 27, dated March 20, 1905, the record shows an elevation of well no. 6 on that date 1345.4 feet. Does that correspond with your original notes?

A Yes, sir.

Q Page 92, October 7, 1905, elevation of water in well no. 1, 1321. Does that correspond with your original notes?

A I haven't that here and haven't checked that up. That is the one I haven't checked up. Will you give me the date and page again?

Q October 7, 1905, page 92 of the Reporters transcript, elevation 1321, well no. 1.

A I will look that up at noon.

Q Page 88 of the Reporters transcript, of date May 26, 1904: Elevation of well no. 4, 1342.9. Does that correspond with your original notes?

A It does.

Q You have one other there, have you not, that has been

noted by Mr. Wright?

A Yes; well no. 7, December 13, 1908, page 2545 of the transcript.

Q December 13, 1908, well no. 7: page 2545 of the transcript. Elevation, 1367.4. Does that correspond with your original notes?

A It does.

Q At page 2469 of the transcript there appears a statement of the discharge of the water amounting to 60.8 inches on June 23, 1903, which I am inclined to think should be 91.2, as appears from page 512 of the transcript. Just look at this table. You notice the measurement to which I refer, June 23, 1903, 60.8, in the column containing tabulation of measurements of well no. 7 or one of the Haskell wells?

A Yes; I note the figures.

Q And at page 512 of your testimony there is a statement "I have a record made June 23, 1903, in which I found well no. 8 was pumping ~~m~~ 91.2 inches, and well no. 3 was pumping 60.8 inches." I would be disposed to think that this tabulation showed the 60.8 in the wrong column. I call your attention to it.

A I will look my original notes up and report after lunch.

Q The measurements were very scarce during that year 1903?

A I will look those up and report after lunch.

Q I would like to call your attention to a passage of the testimony in the McPherson case, line 24 to 32 on page 1337, as follows:

"Q What is the lay of the country there as to being a swale or otherwise in the neighborhood of the Rubio well?

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"A It is generally flat.

"Q Where it is running up this way or rises this way, don't it?

A The general slope is south.

"Q And slopes down to this east wash?

"A No; the slope is south, if I remember right. The general trend of all that formation is to the southeast."

Did you so testify at that time?

A I think so; and I think that is correct now. The general trend of the whole formation of the mesa there is southeasterly. The Cucamonga watershed on exhibit F demonstrates that. Of course, locally on those hills you can get a trend of a small area in most any direction. But I understand that question to have been the whole of the general conditions, the whole debris cone and whole area of the Cucamonga Red Hills,-- the general trend of the whole formation in that watershed.

Q You gave the testimony described here at that time, and it is correct?

A I did, and I so understand it. As I testified locally at the Rubio well the drainage is south.

Q During the last season of 1908 did you have some measurements made of the water flowing from the Y Tunnel and also from the little cienega east or southeast of the Y Tunnel by a gentleman named Shepley?

A Mr. Shepley measured some water for me. I don't know of any cienega southeast of the Y Tunnel.

Q Well, it may be southwest.

A If you put it that way, it would be better.

Q I may be off in my geography. Did you set the weirs for his measurements or did he find the weirs in place?

A The weirs were in place and had been for years.

Q There were two places of measurement?

A Yes, sir.

Q Will you describe the two places at which Mr. Shepley made the earliest measurement extending over the year 1908 or the greater part?

A I think only for a short time. Possibly 60 days ~~xxxx~~, of ~~thatx~~. he measured it while the water was running in the Y Tunnel and for part of the time or for the same time he measured the waters running over the little weir known as the China Springs weir.

Q He was in the employ of the San Antonio Water Company?

A No; I think not. He was in the employ of the Ontario Power Company. He was the superintendent of the Ontario Power Company and I requested him to take some observations as he was out there in connection with his power duties, and I requested him to make certain measurements, and he made them. Those weirs are as follows-- I will state that I located those accurately and definitely in my testimony for plaintiffs over a year ago in this case.

Q But these measurements were made since?

A Yes; but at the same points.

Q Show the points on plaintiffs Exhibit 1.

A First, the weir at the Y Tunnel Division Box. It is marked on Plaintiffs exhibit 1 near the center of the east line of section 4, township 1 south, range 7 west. It is a circle marked on the map with the words "Div. Box. 1 El.1353"

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and has been referred to in all the testimony as the Tunnel Division box.

Q Where is the other?

A The China Springs weir is west and a very little south of said division box above described, and is shown on the map by a lead pencil circle with the words "China xx Cienega" written just above, and I will write the word "box & weir." That is the approximate location. It may not be strictly correct.

Q What is the width of those weirs, Mr. Trask?

A The weir in the tunnel division box consists of a double weir; each weir is two and a quarter feet long. The weir at the China Springs, the length of it I don't recollect. I have it in my notes at the hotel; but I don't recollect the length of it. It was a short weir-- a small one. If you wish that I will present that when I give you those figures.

A Yes; the exact length of the two weirs.

Mr. McKinley: It is understood that that matter of a stipulation as to these various directors may be taken up at any time. Besides that, Mr. Hinkle has not gone over his testimony yet to correct errors. My defendants rest.

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Mr. Curtis: On behalf of the Sunset Water Company we offer the articles of incorporation of the Sunset Water Company as filed in this office of the county clerk on the 3rd day of January, 1901, and in the office of the Secretary of State January 10, 1901. I will read the purposes for which it is formed:

"The purposes for which it is formed are the procuring, development and supplying of water for hydraulix irrigating and domestic use of the stockholders at Cucamonga California, in proportion to the amount of stock held by them; and the acquiring of real property, land , water and water rights, reservoirs, ditches, aqueducts, flumes, ~~xxxx~~ wells tunnels, machinery, and any and all other property and works necessary to carry on the business aforesaid, and for the purpose of selling and disposing and mortgaging such lands and other property as may be necessary for the better carrying out of the purposes aforesaid." They are dated the 22nd of December, 1900, but they were filed in the office of the County Clerk on January 3, 1901, and in the office of the Secretary of State January 10, of the same year.

Mr. Curtis: We offer in evidence the following deeds:

Deed from the Cucamonga Homestead Association, a corporation, to Richard Garvey, of 20-acre lot number 5, block 8, of Cucamonga Homestead Association; dated April 5, 1876, and recorded March 6, 1891, in Book 141 of Deeds, at page 134.

Also a deed from Richard Garvey to Henry [illegible]. Lawrence of the same property, dated July 18, 1893, recorded July 20, 1893,

in book 103 of Deeds, page 330.

A deed from the Cucamonga Homestead Association, a corporation, to C. L. Thorne of 20-acre lot no. 6, of block 8, Cucamonga Homestead Association, dated April 5, 1876, recorded November 6, 1891, in Book 141 of Deeds, at page 128.

A deed from C. L. Thorne to Henry W. Lawrence of lot 6 block 8 Cucamonga Homestead Association, dated July 18, 1893, recorded July 20, 1893, in Book 183 of Deeds, page 333.

A deed from Henry W. Lawrence and Ida L. Lawrence, his wife, to Orville A. Stanton, dated January 15, 1895, recorded the same day in Book 204 of Deeds, page 111, of lot 5 and 6 block 8 Cucamonga Homestead Association.

A deed from Orville A. Stanton and Eliza A. Stanton, his wife, to the Sunset Water Company, of the westerly 10 acres of lots 5 and 6 block 8 Cucamonga Homestead Association, dated April 7, 1901, and recorded May 23, 1901, in Book 300 of Deeds, page 317.

A deed from Isaias W. Hellman and Esther Hellman, his wife, to James Delorie of the West Half of lot 4 in block 8 of the Cucamonga Homestead Association, dated May 9, 1900, recorded in Book 286 of Deeds, page 182.

A deed from James Delorie to A. E. Gaylord, A. Stinchfield, J. A. Hall, J. A. Beatty and W. J. Puls of the same property,

the west half of lot 4 block 8 Cucamonga Homestead Association, and dated December 27, 1900, and recorded December 29, 1900, in Book 289 of Deeds, page 54.

Deed from A. L. Gaylord, A. Stinchfield, J. A. Hall and H. J Puls to the Sunset Water Company, dated March 11, 1901, recorded April 10, 1901, in Book 305 of Deeds, page 47, of the west half of lot 4, block 8, Cucamonga Homestead Association.

A deed from Isaias W. Hellman and Esther Hellman, his wife, to J. E. Davis, of the east half of lot 4, block 8, Cucamonga Homestead Association, dated May 9, 1900, recorded May 19, of the same year, in Book 286 of Deeds, page 185.

Deed of J. . Davis and E. F. Davis, his wife, to Sunset Water Company, of the same property as the last, the east half of lot 4, block 8, Cucamonga Homestead Association, dated February 21, 1901, recorded March 2, 1901, in Book 300 of Deeds, page 122.

H. A. Puls, a witness called by defendants, being first duly sworn, testified as follows:

Direct Examination.

Mr Curtis, Q What is your name?

A H. A. Puls.

Q Where do you reside?

A Riverside.

Q Are you acquainted with the Cucamonga country in this case?

A I am some.

Q How long have you been acquainted with that country?

Well, I couldn't say positive, but I have owned property there for 26 or 28 years.

Q Continuously?

A Continuously.

Q And do you own the same property today?

A I do, some of it.

Q What connection have you with the Sunset Water Company?

A At present I am President of the Sunset Water Company.

Q How long have you been president of the company?

A I don't remember. The biggest part of the time since it has been incorporated, I think.

Q Are you the same H. A. Puls, who assisted in its incorporation, and who signed the articles of incorporation?

A Yes, sir.

Q Have you been a member of the company continuously since its incorporation?

A I have.

Q And a member of the board of directors during that time?

A Yes, sir; I think I was in the directors all the time since it began.

Q Do you remember when you put the first well down, when the Sunset Water Company put the first well down on its property at Cucamonga?

A I do.

Q When was that?

A I don't remember exactly the date; I have no dates that I could give.

Q Do you remember the year?

A Well, I judge, as near as I can remember it was 1891.

Q 1891 or 1901?

A 1901.

Q Was that put down by the Company, or by the owners of land who afterwards organized the company?

A It was put down by the parties that owned the land.

Q Do you know about when the well was finished?

A No, I do not.

Q To what use has that well been put, since it was drilled in 1901?

A Well, we have used it for irrigating water, as our original water stream began to dry up, getting worse and worse every year, consequently we saw there was no other way, but we had to see where we could get some water some other way, to keep our trees alive.

Q During what seasons have you pumped that well since 1901: Has it been pumped every season?

A I think we have pumped it constantly every season.

Q During the irrigating season of every year since 1901?

A Yes, sir.

Q Do you remember about what amount of water you have received from the well since that?

Mr Britt: Is there no record kept of the quantity of water pumped, which would be better evidence?

Mr Curtis: There is.

Mr Britt: We should think the best evidence obtainable, the most accurate evidence, should be produced.

Mr Curtis: We will have to prove that by another witness.

A Well, I would say right here that I don't think I could state the amount, nohow.

Q Did you put down more than one well?

A I put down one, and a few years afterwards put down another one.

Q Do you remember what year you put down the second well?

A No, I don't, exactly.

Q Do you know how much water you got from the second well?

A Somewheres about 25 inches I think.

Q Do you know how frequently younhave pumped the second well since it was put down?

A Oh, we pumped it constantly.

Q During every irrigating season since it was drilled?

A Yes, sir.

Q What use has been made of the water derived from those two wells?

A Used it for land that we had set out - planted out.

Q Whose land is it used upon?

A On the incorporators' I think most altogether of this company.

Q And stockholders - on the lands of the stockholders?

A On the lands of the stockholders of the Sunset Water Company.

Q Where was that land situated with reference to the wells in what direction?

A Well, south I would say.

Q About how far south was the most distant land from the wells situated?

A The most distant might be a mile and a half, may be more.

Q Was that land improved?

A All improved.

Q What was it planted to? What werethe landsplanted to?

A It was planted to orange trees and grapes and lemons.

Q Was the water derived from the well necessary for the use of the lands, in order to keep alive the trees and vinesxgrowing thereon?

A Well, we wouldn't have got any crop, and the trees would no doubt perished, if they hadn't got any water.

Q How long have you been engaged in the raising of oranges and citrus fruits in about Cucamonga?

A Well, I think my orchard there is somewhat over 20 years of age, and I had some of it planted out in other fruits just as soon as I bought it.

Q Are we to understand that you have been engaged in the cultivation of oranges, and citrus fruits for the last 26 years, since you purchased your land?

A Yes, sir; 26 to 28 years.

Q You are familiar are you with the cultivation and irrigation and care of oranges and other citrus trees in the

neighborhood of Cucamonga?

A I think I am.

Q About how much water is required for the proper irrigation of orange trees in that locality?

A Well, that depends on the size of the trees, the age of the trees somewhat; younger trees they don't need as much as older trees, and a fullgrown orchard would not need less than an inch to six acres - from five to six.

The Court, Q When do you mean an orchard is fullgrown, what age?

A Well, whey they are somewheres about 20 years or over.

Q Are all the groves owned by the stockholders of this company that old?

A Well, some of them are younger I presume, but the majority of them I would say are that age; there about that time, within a few years, they were all set out.

Q An inch to six acres?

A An inch to six acres - or five.

Mr Curtis, Q And how much is required for trees younger than 20 years of age?

A Younger trees we could get along with half that amount, until a certain age.

Q Well, at what age would you say?

A Oh, until they are four orfive years old or six years, until they get into bearing well, and then they need more water.

Q When they get into bearing about five or six years of age about how much would you say they required?

A They require pretty well up to the limit; ofcourse they keep gaining a little until they were somewheres about 20 years I would say.

Here the Court takes a recess until 2 O'clock p.m.

Afternoon Session, 2 p.m.

Mr. Conner: I ask leave to file an amendment to the answer of the Hermosa Water Company, both the answer to the complaint and the answer to the complaint in intervention.

Mr. Haskell: No objection.

Mr. Britt: No objection.

The Court: Leave will be granted.

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M. A. PULS.

M. A. Puls, previously sworn, recalled for further direct examination, testified as follows:

Mr. Curtis: Q What else was done by the Sunset Water Company besides boring the two wells? Was there any pipe line or anything of the kind built in connection with the wells to conduct the water?

A Yes, sir; there was pipe lines connected to each one of the stockholders' land.

The Court: Q Was that done by the company or by the owners themselves?

A By the company.

Mr. Curtis: Q Were any objections made by any one to you or any of the officers of the Sunset Water Company, as far as you know, as to your digging the well and constructing the pipe line, or carrying off the water?

A Well, I never heard it mentioned.

Q Did any of the Old Settlers' Water Company ever make any objections to your work there in boring the well, and in piping the water off?

A They did not. Not to my knowledge any way; not that I

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heard.

By the Court: Q I understand you there was no objection ever made so far as you know by anybody?

A By anybody; that is right.

Q What is the value of the lands per acre belonging to the stockholders of the Sunset Water Company?

A Well, I don't know; it would depend upon whether they had water for it or not . The land itself I don 't consider would be worth very much.

Q Well, I understood you to say that this water was conveyed to the lands of the stockholders of the Sunset Water Company?

A Yes.

Q What is the value of these lands of the stockholders of the Sunset Water Company upon which the water from the Sunset wells are used?

A Well, I should call that land worth from five to eight hundred dollars an acre, with that water right, if there was nothing planted on it.

Q And what , if there was a twenty-year old orange grove growing on it?

A Well, of course it is hard ~~to~~ telling. The way they are selling now they ought to be worth from fifteen hundred to twenty@five hundred dollars an acre.

By the Court: Q How long has the water from these wells been used on the lands of the stockholders?

A Ever since it has been pumped.

Q When was it first pumped?

A Well, I don't remember the date.

Q Do you remember the year?

A Some time in 1901.

Q That was the first well, I suppose?

A Yes, sir.

Q How much later was the second well put down? The next year?

A No. I think it was a couple of years, if I remember right.

Q Do you remember what proportion of the water came from the first well?

A I couldn't tell exactly, but about twenty-fove or thirty inches. Our secretary naturally had the records of that.

Q Would the two wells produce about the same?

A Well, the second well don't produce quite as much I don't think. In the first place, we had some water besides that, we got from the old system for awhile.

Q Where did that come from,

A From the Cucamonga Springs; it kept getting less until there was nothing at all after awhile.

Q Do you mean you got that as stockholders of the Water Company?

A Well, some of the consumers that had stock in the Sunset Company are part owners of the old right from the Cucamonga Company.

Q Have they stock representing that right?

A Some of them have.

Q In what company?

A Not in the stock -- it is in the deed right.

Q It is not stock, then?

A No.

Mr. Curtis: Q What was that water right known by? By what name was that water right known, the right that you have referred to from the Cucamonga Springs.

The Court: Q What is it called? What is its other name?

A There is two or three different names; there is the class A and class B, and such like; but it is all the same deeds, an original deed from the old Cucamonga Company.

Q Cucamonga Water Company?

A No; from the Cucamonga Company itself -- from Hellman -- the land company.

Mr. Britt: The answer of the witness as to the source of title is not responsive to the question, and we ask that it be stricken out.

The Court: That will be stricken out.

Cross-Examination.

By Mr. Britt: Q Where are the lands to which you have referred as possessing a value of five to eight hundred dollars an acre, without orchards, without anything planted on them? Where are they situated with reference to the old Cucamonga Vineyard, the lands of the Cucamonga Vineyard Company, east or south-east?

A East, principally; in fact all of it is east from that/

Q How do they compare in quality with the lands where the Cucamonga Vineyard is situated?

A I don't know as there is any difference materially.

Q Take those lands of the Cucamonga Vineyard Company, several hundred acres, where the old vineyard is situated, and assuming that there were gravity water, water supplied

from the Cucamonga Creek for the irrigation of those lands, what would the lands be worth for purposes of orange culture?

Mr. McKinley: Objected to as irrelevant, immaterial, not proper cross-examination, and no sufficient foundation has been laid for it as to this witness beingan expert on that subject.

The Court: The objection overruled.

Mr. McKinley: Exception.

A Well, I should think they would be worth just about the same price with gravity water. I would consider that land worth -- of course there might be exceptions in spots I admit, because I don't know exactly every acre of the land -- but on an average that land with gravity water I would say would be cheap at $800.00 an acre.

By the Court: Q That is, without any growing crops on it at all?

A Yes, sir; without anything on it.

Mr. Britt: Q You are acquainted with the land of the Cucamonga Vineyard Company?

A I am. I know where it is located. I have known it for the last 27 or 28 years.

Q You have known it for 27 or 28 years?

A I do.

Q You live in Riverside, I understood you to say?

A I do.

Q Are you engaged in growing oranges in Riverside?

A Yes, sir.

Q You said that you estimated the need of lands in that

neighborhood where the Sunset Water Company's water is used at an inch to six acres for fully grown trees, or trees 20 years old. Did I understand you right?

A I would say that would be a fair average.

Q How does that compare with the use of water in the orchards of that age at Riverside?

Mr. McKinley: Objected to as not cross-examination and incompetent.

The Court: Sustained.

Mr. Britt: Exception.

Q How far is Riverside from the district in which you mentioned the orchards are situated?

A About 18 miles.

Q Is irrigation generally practiced, for the irrigation of orange orchards of Riverside?

Mr. McKinley: Objected to as irrelevant and immaterial and not proper cross-examination.

The Court: Sustained.

Mr. Britt: Exception.

Q Have you been an orange grower at Cucamonga in the district of lands where the Sunset Water Company's water is distributed for irrigation?

A Yes, sir.

Q Do youstill have an orchard there?

A Yes, sir. The first I set out there about 25 years ago.

Q How far is that orchard from the lands of the Cucamonga Vineyard Company?

A I don't know. I judge about half a mile or less; it is not over half a mile.

Q To the east?

A The Vineyard Company is west.

Q West from your organe orchard?

A Yes, sir.

Q Your orange orchard is east from the Vineyard Company's lands?

A Yes, sir.

Mr. Goodcell: Q I understood you to say that your company's wells were pumpd continuously?

A They have every year; that is, they have not been pumped continuously, because in winter time they don't need any water.

Q During how many months in each year have the wells been pumped?

A Well, I couldn't give that definite. We will have to leave that to the books of the Secretary.

Q There is some one else connected with your Company that has more definite information about that?

A Yes, sir; our secretary will give all that information about dates.

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J. A. BEATTIE.

J. A. Beattie, a witness called by defendant, being first duly sworn, testified as follows:

Direct Examination.

By Mr. Curtis: Q What is your name?
A J. A. Beattie.
Q Where do you reside?
A Cucamonga.
Q How long have you resided there?
A 16 years.
Q Do you occupy any official position in the Sunset Water Company?
A Yes, I am a director, and also its secretary.
Q How long have you been a director of the company?
A Since it started, seven years ago.
Q How long have you been secretary of the company?
A Six years; I was out one year.
Q Were you secretary of the company the first year?
A The first year; yes, sir; the second year I was not, but I have been ever since.
Q You were the same J. A. Beattie whose name is signed to the Articles of Incorporation of the company, are you?
A Yes, sir.
Q Are you acquainted with the wells of the Sunset Water Company?
A Yes, sir.
Q And the lands on which they are bored?
A Yes, sir.
Q Where are those lands? See if you can point them out on

defendants' exhibit D?

A The lands are here.

The Court: The witness points to section 34.

Q Are all the lands in that section?

A We have 30 acres in which the wells are bored, and they are in that section right there.

Q Do you know what the correct description of the lands are upon which the wells are bored, whether they are in any subdivision or simply in section 34?

A They are known as parts of lots 5 and 6, block 8, of the Cucamonga Homestead Association lands. I think I have the figures right.

Q Are there one of the wells on the east half of lot 4, block 8?

A Yes, the second well is on lot 4, block 8. The first well is on the west half of 5 and 6, block 8.

Q I will ask you to give the court a little history of the boring of those wells, by whom they were bored and when?

A Do you mean the contractor who did the work?

Q No, not the contractor, but the parties who bored them. Were they put down by the Sunset Water Company?

A The first well was bored by a committee, appointed to take charge of the work before the Sunset Water Company was incorporated. Afterwards, when it was incorporated, the work was turned over to the Sunset Water Company.

Q Who was that committee?

A Mr. Puls, Mr. Stinchfield, Mr. Gaylord, Mr. Hall and myself.

Q I notice that one of the pieces of property was conveyed

to you five gentlemen?

A Yes, that was before we incorporated.

The Court: Q Was that done in anticipation of the incorporation ?

A Yes, sir, just holding it for the time being.

By Mr. Curtis: Q By whom was this committee appointed?

A By the original parties who signed an agreement to prospect for water, and they afterwards became the stockholders in the Sunset Water Company; they appointed this committee

Q Do you remember just when that well was bored?

A The contract for digging the shaft of the first well was let in October, 1900; I forget just the exact date; and I think the boring, the drilling, commenced in December and ran through the winter, the well being finished in April, 1901.

Q Which well did you put down first?

A The well known as #1, the one on the west half of lots 5 and 6.

Q What direction is that from the second well?

A It is a little south and west.

Q Did you strike water in that well?

A We got water at I think 64 feet in the shaft, and then we stopped digging the shaft, and the contract for boring was let, and as the work progressed the water rose in the shaft some, so that when the well was perforated the water had risen I think some 30 feet in the shaft higher than it was originally. Then we installed a pump, and immediately that water was pumped out; two or three minutes emptied the shaft entirely.

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Q What depth did the water drop down to?

A Down to the bottom of the shaft, 84 feet; then we had to dig the shaft deeper, in order to get our pump down so as to get into the water again; it took two or three months of that summer, so it was July before we began pumping for irrigation; and our head at first was about 17 inches; it increased to about 40 at the close of the irrigation season.

By the Court: Q You say it increased?

A It increased; yes, sir.

Q Did you lower the pump, or change the pump?

A We lowered the pump, and we reperforated the well.

By Mr. Curtis: Q How long did you pumpk it, that irrigating season?

A we began some time in July, I think about the 13th, and I haven't any record of just when we stopped, but it was probably in November.

Q have you any record of the number of days that you ran that year?

A No, sir.

Mr. Britt: Q That was in 1901?

A In 1901; yes, sir.

Mr. Curtis: Q Since that time what has been done with this well?

A Why, we ran it for two seasons with a centrifugal pump, and we found that was not effective, so we took that out and put in at the beginning of the third season a deep well pump which has been in there ever since.

Q Has it been pumped every year?

A It has been pumped every year.

Q How much of the year?

A If I can refer to a little memorandum here I can tell you just about; I haven't any record of 1902; Mr Stinchfield was running the pump at that time, and he kept the records, and I never got them from him.

Q As secretary of the company do you know whether it was pumped any in 1902?

A Yes, sir; very regularly from the first of May to the end of November; that is about our usual running there; sometimes it varies a little.

Q Every day?

Q Every day unless there was a breakdown ofthe pump.

Q Twenty-four hours each day?

A Night and day, 24 hours.

Q You say you have not any record for that year?

A No, I haven't any record, but I know the well was pumped steadily.

Q Have you land upon which this water is used?

A Yes, sir.

Q Did you receive your water regularly during that year 1902?

A Yes, sir; excepting sometimes that the power would be off, and the pump stopped for an hour or two.

Q Since the year 1902 have you any records as to the amount of water that well has pumped, and the length of time each year that it has been pumped?

A In 1903, we began pumping the first of June, and stopped on the 24th of November; we had a shut down during that period of 21 days.

Q What was the cause of that shutdown?

A Well, I don't remember just now.

Q Was that one shutdown or a number of shutdowns?

A It was a number of shutdowns; it wasn't 21 days all at omce; but that was the average of the number of days it was shut down. Do you want the inches?

Q Yes, the average inches pumped for that period?

A The average for that period was 27.46

Now, in 1904, we had a special winter run. - it was a dry winter and we ran in January; that is during some days in January to March 16, about 16 days; that was not our regular irrigation run; we began on that year on May 16 of that year, 1904, and ran to December 30, with a total of eight days shutdown during that period. Average inches pumped for that period 33.29.

Q Now, in the year 1905?

A We began on June 11, and ran to November 19, and with shutting down 18 days during that period; and that year about the first of July we started the second pump; so that we ran two pumps from the first of July to the end of the season and pumped a total head out of both pumps of 56 inches.

Q Wheredid you put the second pump?

A The second well was bored on the east half of lot 4 is it up there.- I don't remember just the numbers,- I think it was lot 4, block 8, it was bored on the east half of that, and we started to bore that well in November, 1904; it was a hard job and took all winter, and we didn't get through until the following May I guess, and the well was not installed for pumping until the first of July.

Q And you put the second pump in the second well did you?

A Yes, sir.

Q What kind of a pump was it?

A The same as in the first well, a deep well pump, a plunger pump.

Q During what part of the year 1905 did you run the second pump?

A Began about the first of July and pumped to the end of the season.

Q And what was the average amount of water derived from the two wells during that season?

A 50 inches.

Q Now, in 1906, what if any pumping did you do from these wells?

A We began on June 5th, and pumped to November 10th, with eight days shutdown during that period.

Q When you say eight days you mean only eight days in all?

A Yes, but spread out over the season; perhaps two days in a month or less.

Q Have you any record there of how many days you actually did pump in the year 1906?

A 160 - practically 160 days.

Q And in 1905 have you any record of the actual number of days pumped?

A 145.

Q And of 1904?

A 230.

Q And of 1903?

A 156.

Q Now, going back to 1906, what was the average amount of water that you got from the two wells during that year?

A 40.58 inches.

Q Now, in the year 1907 what if any pumping did you do?

A We began May 23, and pumped to October 17, running actually about 146 days, with only three days shutdown. During that period we pumped an average of 50 inches, both wells.

Q For the season?

A For the season.

Q And 1908?

A Began May first and ran to December 2, pumping 195 and a fraction days, with 21 days shut-down during that period, pumping an average of 52 inches.

Mr Britt, Q Does the 21 days come out of the 195 days?

A No, sir; we pumped actually 195 days.

Mr Curtis, Q In the year 1905, before you began pumping the second well, did you pumped well number 1 any?

A We pumped that for a month, during the month of June.

Q What amount of water came from the well during June?

A We got 30 inches during the month of June, when we started the second well, and the total for the two was 56 inches; I don't know just how it is divided, because it all goes over one weir into one pipe line; and unless we stop one pump and wait for the pipe line to empty, we can't tell exactly just what each one is doing; we have not tried to; we have not bothered about it.

Q At the time you put in this first well, did you construct any system of pipe line, for the purpose of conducting this

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water away from the well?

A Yes, sir; we put in a 20 inch tunnel of vitrified pipe about 1060 feet, tapping the shaft 30 feet from the surface, and coming out near the surface of the ground, just a little distance above Base Line; then from there we put in an asphaltum-dipped steel pipe, about three or three and a half miles all told.

Q This tunnel brought the water down to about what Street?

A Just a little north of Base Line or 16th street.

Q And from there on, where was the pipe line laid with reference to the public streets?

A We have from that point going east, we have about half a mile, perhaps more than half a mile, of from 10 to 8 inch pipe laid in the public street; the trench was dug on the south side of Base Line; then from Base Line down to the lower end of our system, which runs about two and a quarter miles from Base Line, we put our pipe on private property, got a right of way from the property owners, along the east side, putting our pipe right inside the first row of trees.

Q About how far from the street?

A Probably 10 feet from the line of the road, 8 or 10 feet.

Q Now, did you do anything else in regard to your improvements there, in the making of a reservoir of any kind?

A Yes, I think it was the second year of our existence we dug a reservoir.

Q Where was that located?

A That was on the south line of our property, just on Base Line, a little east of the street.

Q How far from the street?

A 10 or 15 feet, probably; something like that.

Q How high was the reservoir?

A I have forgotten the dimensions of that; it was probably 10 or 12 feet deep; we never used it; we never have used it really, and I never paid much attention to it.

Q How far did it extend above the surface of the ground? Especially on the south side next to Base Line?

A The bank was probably eight feet above the surface of th the ground.

Q What were the dimensions of it, how long and how wide?

A That I have forgotten.

Q Well, about? You have seen it a great many times have you not?

A Oh, from 75 to 100 feet each way; that is just a mere surmise because I have forgotten, because it was done six years ago and we never used it, and I don't pay much attention to it.

Q Were there any objections interposed by any of the plaintiffs in this case, to the Sunset Water Company boring these wells, and constructing this reservoir and pipe line and water system?

A Not to my knowledge.

The Court, Q Was there any objection made by anybody?

A I don't think there was any objection made by any one; that is my impression.

Mr Curtis, Q You were there on the ground every day when the wells were being dug?

A Well, not every day; two or three times a week; I was

there nearly every day at times.

Q You were one of the active men in that enterprise?

A Yes, during the time the first well was being bored, and the construction of the pipe line I guess I was on the ground every day, because it was my business to look after things in a little way, and I bought all the pipe and made contracts for a numberof different things, and I had to keep track of it.

Q Have you the figures showing what this system cost, that is the land, the sinking of the wells, and the installation of the pumps, and the putting in of the pipe line?

A Our total amount invested in real estate, pipe lines, wells and reservoir, stands today at $35,407.30 ; if you want that segregated I can give it to you.

Q Does that include any of the expenses of running the plant?

A No, sir.

Q What does that include only?

A This is the value of the land, what we paid for the land, and for the boring of the wells, equipping them, construction of the pipe line and tunnel; and that is all it is composed of.

Q What has been done with this water that you have extracted from these two wells?

A It has been distributed to our stockholders, in proportion to their holdings of stock.

Q What amount of it has been necessary for the landsof the stockholders of the Company?

A All that we could get.

The Court, Q When Mr Puls was on the stand he madeuse of an expression that I wanted to ask him about, but forgot; perhaps you can answer it: As I understood him to say that practically all of the water was used by the stockholders: Was any of the water used by any one else except the stockholders?

A No, sir; there has not been a gallon of it used except by bona fide stockholders.

Mr Curtis, Q Any of it used for domestic purposes?

A No, sir.

Q You are well acquainted with the lands of the stockholders of the Sunset Water Company?

A Yes, sir.

Q Do you know how many acresof land are owned by the stockholders of the Sunset Water Company that are dependent upon the wells of the Sunset Water Company for water for irrigation?

A Well, we have in our company, the actual acreage is something around 600 acres, 603 to be accurate, of which there is perhaps 30 acres that is not planted to anything, and that would leave 570 which are almost entirely set to citrus fruits.

The Court, Q In that connection I wanted to ask you if this land on which your wells are bored is in trees, vines or crops of any kind/

A There is about eight acres of vines on one of the lots. that isall; the other is bare.

Q Do you use any of the water there for irrigating?

A No, we don't use the water there for irrigating at all; we never havex raised it up to the surface there; I don't

include that in the acreage that I just gave.

Mr Curtis Q You say there was about 570 acres that is planted?

A Something about that, yes, sir.

Q And mostly to citrus fruits: Can you tell us just about how much of this 570 acres are not planted to citrus fruits?

A There is probably 20 acres in vineyard, as near as I can recall it now, and the rest are all citrus fruit trees

Q Do you know how old those trees are?

A Well, they run all the way from young orchards about four years old, - a few - up to orchards,- I have trees probably 20 years old.

Q What proportion of the orchards are the trees over 20 years old?

A Fully two thirds of it.

Q And of the balance, the other third, about what would be the age of the balance?

A Running from four to ten or twelve.

The Court, Q What proportion is under five?

A I couldn't answer that; there is here and there a small section of an orchard that has been planted in the last three or four years, but I don't know the acreage as to that.

Mr Curtis, Q Can you give any estimate of it?

A I shouldn't think there would be more than 20 acres of trees as young as that in the whole acreage.

Q You say these lands are planted to citrus fruits: What variety of fruits are grown on these lands?

A Oranges mainly; some lemons, but mainly oranges.

Q Referring to this map, defendants' Exhibit D, can you

locate on that map, the location of the lands of the stockholders of the Sunset Water Company covered by water from the Sunset wells?

A There is some part out here, east of Turner Avenue.

The Court: That is the north and south street furthest to the east on that map.

A And then our wells are here; the lands that we irrigate are mainly down this avenue, Archibald Avenue, on both sides of the road, and orchards about a quarter of a mile below the Santa Fe track.

Q All south of Base Line?

A They are all south of Base Line; we irrigate all these lands on both sides of Archibald Avenue, with alternations here and there, clear down to a point a little below the Santa Fe and there we stop.

Q Have you any lands east of Turner Avenue?

A Thereis 20 acres in here that belongs to our system, that we run a pipe line along Base Line to, east of Turner Avenue; I think it is just 20; there may be 30 in there; I won't be sure now. That is the only property that we have that we put water on east of Turner Avenue.

Q How long have you lived in Cucamonga?

A Ten years.

Q Are you acquainted with the values of lands in and about Cucamonga?

A Oh, somewhat.

Q You are the owner of an orange grove yourself are you not?

A Yes, sir.

Q And you are in the orange business, the fruit business?

A Yes, sir.

Q And are you acquainted with the values of the lands belonging to the stockholders of the Sunset Water Company and which derive water from the Sunset wells?

A According to age and condition, they are worth probably all the way from $1000 to $1500 an acre.

Q What valuation would you place upon the 603 acres that you have said belonged to the stockholders of the Sunset Water Company, and are watered by the wells of the Sunset Water Company?

A Well, taking it as a whole, that would probably average from $1000 to $1200 per acre.

Q That is, just as they are with the trees and - -

A Just as they are.

The Court, Q Are you taking into consideration the buildings and the improvements?

A No, we don't figure much on buildings out there; it don't go into the estimate very much.

Q You have spoken about having something like 25 acres in vineyard under that system: Is water used for the irrigation of that?

A On some of it, yes.

Q What proportion of it?

A Well, probably 20 acres; I have got about six acres myself that I don't use any water on, and haven't for a number of years.

The Court, Q Have any of these stockholders other water than that which they derive as stockholders of the Sunset Water Company?

A Yes, sir; I have got the list right here; we have all told at present 25 stockholders in the Sunset Water Company, of which 11 have other water rights than the Sunset water; if you wish the names I can give them to you.

~~Mr Curtis,~~ Q Can you tell us what other water that they are using?

A Well, there is nine out of the eleven have Cucamonga Water Company stock, and get water from the Cucamonga Water Company; the other two derive from the Old Settlers' Water Company.

Mr Curtis, Q Do you know whether these that have stock in other companies have enough water from these other companies to irrigate their lands without the water from the Sunset Water Company?

A I don't believe they have; I think they require it all; that is why they came into our company.

Q Do you know whether it is necessary for these owners of the Sunset Water Company stock to use the water that they receive from the Sunset wells in addition to the water that they receive from the other companies?

A With one exception I believe they do; they all need it; there is one exception, and the party I have reference to has had more than he needed, and he rented some heads of the Sunset water at times; but I think this last season he used it all; he had a very young orchard and it did not require very much water, and it is now coming into bearing, and he is using both the Old Settlers and the Sunset water, and I think all of it.

Cross Examination.

Mr Britt, Q You mentioned that you had some vineyard which you do not irrigate and had not irrigated for a long time?

A Yes, sir.

Q Was that because water is more profitable for the irrigation of orange orchards?

A I thought it would do me more good to put it on my orange orchard and let the vineyard go.

Q If you had the water it would have done the vineyard good to receive it wouldn't it?

A Oh, certainly it would; I didn't have it and I didn't put it on.

Q It was more valuable when applied on orange orchards?

A Well, I want to make a statement in explanation of that; my vineyard is rather old, and I intend to dig it up some day, and I didn't care much to keep it alive; I thought the water was more beneficial to use on my orange orchards.

Q Was it your intention to put the land into orange orchard?

A It was my intention and it is my intention.

Q Was your vineyard at one time irrigated?

A It was about 14 or 15 years ago.

Q What was the effect of withdrawing the water from the vineyard? Did the vines deteriorate?

A They did during dry years.

Q Have you continued to cultivate your vineyard?

A Yes, sir; I cultivate it.

Q Did you observe a falling off in the quantity of grapes produced after you ceased irrigating?

A Yes, sir; there was one year that the grapes practically all burned up on the vines, and I didn't get anything to speak of out of the whole business.

Q I understood you to say that the first well of the Sunset Water Company was completed in the Spring of 1901?

A Yes, sir.

Q And was first pumped during the irrigating season of that year?

A We commenced pumping it for irrigation I think on the 13th of July that year; we would have started sooner but the well was not ready; we didn't have the proper equipment; we had some trouble getting the machinery installed.

Q The first season for which you gave the average of pumping, at least so far as I noted, was 1903, when you stated that the average pumping during the irrigating season was 27.40 inches?

A Yes, sir.

Q How did that average compare with the first season pumping in 1901?

A I can't tell you that; when we began pumping in July the water was measured, and we had 17 inches; Mr Stinchfield who was running the pump that season, kept all the memoranda, and I never could get hold of it, and I don't know just what it did get up to; but my recollection is that it got up to about 40 inches in the latter part of the season; I am not sure of it.

Mr McKinley, Q What was the amount you started with you say? I didn't catch the figures?

A 17 inches/

Mr Britt, Q You then ran until November 1901?

A I think so; yes.

Q In 1902 - -

A I have no record of that year at all.

Q Have you any recollection of the quantity that was pumped that year, as compared with the quantity next year when you have a record showing an average of 27.46?

A I don't think I remember anything about it; I have a little memorandum here; we reperforated that well in January, 1902, and ran I think three days, something like that; I have a note here that we pumped 46 inches; that was after the well had been standing from the preceding Fall, and we only ran for a few days; some one wanted some water and we wanted to test the well;and during the regular irrigation season for that year I have no record at all, and I wouldn't hazard a guess.

Q I understand you to say that the well pumped more, after itahad been shut down for quite a long time, that it pumped more at the beginning of the season?

A Yes, we always get water more freely at the beginning of the season, if the machinery is constructed so we can pump more; but the way we are fixed now, we have our machinery geared to go so fast and pump so much, and it practically remains the same, dropping off a trifle at the latter part of the season.

Q Your recollection from personal observation would allow you to compare the pumping for 1902 and 1906 or not?

A I think it might run the same.

Q You sunk your second well in 1905?

A In the winter of 1904-1905; finished in the Spring of 1905.

Q So you began to pump it about the first of July, 1905?

A Yes, sir.

Q What is the distance of the second well from the first well, approximately?

A I think about 800 feet; perhaps a little more.

Q In which direction is the second well from the first?

A The second well is east from the first. it lies a little north and east.

Q You speak of your constructing a tunnel: did that tunnel connect the two wells?

A No, sir; that tunnel was begun at the shaft ofthe first well, and running south, I think something like 1060 feet; we tapped the shaft at 30 feet from the surface; we put that tunnel in simply to save the lift; it was dry ground and no water in it or anything of that kind.

Q What was the depth of the tunnel below the surface?

A At the well it was 30 feet, and gradually coming out as it went down, and coming out at the Base Line, about four feet from the surface of the ground.

Q What was the purpose of that tunnel? To avoid the expense of the lift?

A To avoid the expense of the lift; we thought it would pay us to do it and save on power.

Q Are both wells connected with the tunnel?

A Yes, in a way they are; the second well is connected with the shaft of the first well, with an 8 or 10 inch steel pipe, and the water is delivered down the shaft of the

first well, and into the mouth of the tunnel, through that pipe line.

Q The two wells are connected by a pipe?

A Yes.

Q Laid underground at what depth?

A Oh, about two feet.

Q Do you remember the depth of those two wells, respectively?

A Number 1 to the best of my recollection is 805 and a fraction feet; number 2 I think is 545; either 545 or 565; I think it is 545.

The Court, Q How do they compare in productiveness.

A Well number 1 has always delivered the most water.

Q That is the deeper one?

A Yes, sir.

Mr Britt, Q You mentioned that when you put the shaft down first at well number 1, you went to a depth of 84 feet to water?

A Yes, sir.

Q Do you know to what depth you bored or drilled or dug, before you found water at the second well?

A We did not find any water at all; we put our shaft down about 90 feet and stopped in dry soil; and on faith of having water in the other well we commenced drilling, and I don't know at what point we struck water in the second well; but when we stopped our shaft was dry, practically 90 feet.

Q Do you know approximately how far you went below the bottom of the shaft of the second well before you struck

water?

A No, sir; I do not.

Q Do you remember at what elevation the water stood in well number 2 when you ceased drilling?

A No, sir.

Q Have you kept a record of the expense of lifting water, pumping water from those wells?

A Yes, sir.

Q Well, tell us, in the first place, whether you have a separate pumping plant for each well?

A Yes, sir.

Q You put down first in the well number 1 the centrifugal pump?

A Yes, sir.

Q And did not find that satisfactory and then you installed a deep well pump?

A Yes, sir.

Q Any name for that latter species of pump, other than deep well pump?

A We boughtit from a San Francisco concern.

Q I don't care about the name of the manufacturer.

A Well, it is known as a Garrett deep well pump; that is the name we give it, anyway; that is thename we know it by.

Q What sort of a pump have you on well number 2?

A The same.

Q What was the cost of your pumping plants?

A By that I understand you to mean machinery and pump?

Q Yes, sir; putting it in place, getting it ready for operation.

A Well number 1 cost $4527.16; the second well $2586.40 .

Q That is the cost, ready for business?

A That is the actual cost, as shown by the bills we paid.

Q The pumping plant of the first well was installed in 1902?

A In 1901.

Q And for the number 2 I suppose in 1905?

A In 1905.

Q Now, from what depth did you raise the water in number 1? From what depth did you pump the water in number 1?

A I don't believe I can answer that question accurately; something like 110 feet or 120 feet.

Q Did it drop with the advance of the season?

A Yes, sir; It always drops down; Just how far I can't tell.

Q From what depth did you elevate the water in number 2?

A I don't know; that well is so closed up at the bottom of the shaft, that we can't get into thecasing to measure that well at all.

Q Is your pump of a sort that you lower into the well as t the water descends?

A No, it stands just where we put it in the first place.

Q What was the cost of pumping the water out of wel number 1, after you had installed your machinery?

A It has cost - well, I have to give you that by the heads for a 24 hour run; when we were running with the centrifugal pump the first two years, it cost between $11 and $12 a head of 24 hours; it is now costing about $9.50.

The Court, Q What do you mean by a head? I suppose that varies.

A That varies all the way from 25 to 26 or 27 or 28inches as the case might be.

Mr McKinley, Q The head is half of your production?

A Yes, sir; now.

Mr Curtis: Half now, and the wholeof it when they had one pump.

Mr Britt, Q That is true is it?

A Yes, sir.

Q Half now, and the whole of it, when you hadone pump in one well?

A Yes, sir.

Q Well, that head was the whole output of the well was it when you had but one well?

A That was true, yes.

Q And the cost that you gave would be about the cost per day?

A Per day of 24 hours for a head.

The Court, Q You speak of the cost: I suppose that means the actual running expenses for labor and fuels? You don't figure anything in the nature of a sinking fund or wear and tear on machinery ?

A Well, in those figures it includes the power bill, lubricating oil, engineer's salary, insurance on the plant, and general labor for repairs and such like.

Q That does not include interest on the cost?

A No, sir.

Mr Britt, Q Did you operate your pumps as economically as you could?

A Tried to.

The Court, Q Did you have a shaft to start with in each

of the wells?

A Yes, sir; we did in each of the wells; the second well we got hung up down about 250 feet on some large boulders, and it was impossible to go any further, so we had to abandon it and we started to drilling, and begun about 20 feet away from that first shaft, from the surface of the ground; when the well was finished we dug a shaft down to the required depth to get the pump down.

Q What sized wells did you drill?

A The first well number 1 is a 15 inch casing for about 325 feet from the surface of the ground, and 12 inch the balance of the way; the second well is 15 inch casing, I think for 275 feet, and 12 the balance of the way.

Q You spoke of having increased the flow of one of the wells by cutting the casing - I believe you cut it the second time.

A Yes, sir.

Q Did you make any effort to find out at what depth the surplus of water came in?

A No, I couldn't tell.

Q Have you any record of the materials that was taken out of the wells as they were dug, the logs of the wells?

A Mr Cousins put those in. I haven't that memoranda.

Mr McKinley: Those logs are in evidence.

Mr Britt, Q What was the cost of sinking those two wells?

A The cost of well number 1 was \$5141.71; the other well, \$3029.61; and that included the shaft and boring.

Q What was the cost of that tunnel which led from well number 1 to the south.

A $2428.93.

Mr Haskell, Q What was the cost of the pumps?

A Those pumps cost around, laid down, about $1350.

Q As I understood it, when this first well was completed, you had a rise of water in it did you?

A Yes, sir; there was a rise of water in the shaft of about 30 feet.

Q That would makeit about 54 feet to water approximately at that time?

A Just about.

Q Then later on the water sunk away didit?

A When we put our test pump in to test the well, in five minutes time that water was all gone down to the bottom of the shaft, and eventually we had to sink that shaft I think 12 or 15 feet deeper, in order to get our pump down into the water.

Q That was a centrifugal pump placed at the level of the water was it not?

A Yes.

Q Do you remember how the water stood in that well at the end ofthe pumping season the first year?

A No, sir; I couldn't tell.

Q Do you rememberhow it stood at the beginning of the pumping season, the second year, 1902?

A No, sir.

Q Then in 1902 was it that you placed this deep well pump?

A By, my recollection is it was 1903.

Q Do you rememberhow the water stood in that well in 1903 when you placed that deep well pump?

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A No, sir; I didn't make any measurement of that; Mr Cousins has all of that data and he can give you that later on; he made all those measurements and I didn't pay any attention to it.

Q Now, you stated that you lifted this water 110 or 112 feet, was it?

A That is my impression; I wouldn't be sure.

Q Do you mean by that that that is the point where the bottom of your deep well pump is placed in the well, or at the point where the water sinks when the pump is in operation?

A My recollection is that when we had that 110 feet lift it was the centrifugal pump, and the water was probably 20 feet below the pump; that was a suction pump and went down into the water; just how much ~~water~~ that water dropped through the season I don't know.

Q You don't know the waterlevel then since 1903, since the deep well pump has been put in?

A No~~x~~, sir.

Q Does it make much difference - You have power enough to operate those deep well pumps at their full capacity anyhow?

A Yes, sir.

Q And their capacity is limited by the stroke, and the question of whether there is water enough to pump or not?

A That is right.

Q And there isn't much variation for that reason.- isn't that true?

A That is true.

Q In that respect it is different from the centrifugal

pump, where the suction limits is sinking away from the place where the pump is placed?

A Yes, sir.

Q Have you ever, with the exception of the time that you spoke of when you exhausted the shaft when you were testing the well, reduced the level of the water in the well, so that you could not pump it?

A The centrifugal pump pretty near gave out, on account of the water getting below its capacity, and that is why we changed to a deep well pump so that we could get down to the water.

Mr Haskell, Q Did the water which rose in the shaft to a depth of about 54 feet below the surface, stand at that elevation until you began to pump it?

A It was there for probably a month after the well was perforated; then we put in a temporary pump to test the well and it immediately pumped that water out in a few minutes, and it never came up there again.

Q It never came up again?

A It never came up again.

Q But it stood at about the same elevation until you did pump?

A Yes, sir.

Q What was the depth of the well or shaft, entire depth, at the time you began to pump it for those experimental purposes?

A 84 feet.

Q Then there was about 30 feet of water in the well when you began to pump it?

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A Yes, sir.

Mr Burr, Q You testified that the pumping plant on well 1 cost some $4500 and some odd dollars, while the other plant only cost $2500 and some odd dollars?

A Yes, sir.

Q In that $4500 did you include the cost of taking out the centrifugal pump and replacing it?

A Yes, sir; that has been equipped twice and that includes double expense.

Q It includes double expense, equipping it twice?

A Yes, sir.

Q How did the water of well number 2 behave when you struck it? Did that rise?

A My impression is it did not.

Q You were not there?

A I was there at times; Mr Cousins was in charge of the matter and I left it to him.

Q You don't know whether it rose or not?

A No, I don't know.

Q You spoke about some vines owned by you, six acres - what kind of vines are those?

A Sultanas.

Q They are not wine grapes?

A No, sir.

Q You spoke also of their having dried up on one occasion - what year was that?

A I think it was in 1901.

Q Since that time have you got good crops from them, without irrigation?

A Not always; I have had one or two good crops since then; about two I think.

Q What kind of a crop did you get last year?

A Just an average crop; nothing extra. They were small green undersized raisins and they didn't come out very well.

Q You also spoke of 25 acres which were under your system: were those wine grapes or raisin grapes?

A Some are wine grapes, and some raisin grapes; I couldn't tell just what difference there is; it is in two or three lots.

Q What kind of grapes are those on the company's lots around the well?

A Those are Sultanas.

Q All raisin grapes?

A Yes, sir.

The Court, Q How have they done?

A They have not done very well; we have never given them any water, and they had been used to water before we acquired the property.

Q Does that make a difference, that you have observed?

A I believe it does.

Mr Surr, Q Why don't you give them water?

A We don't think itis worth while; we would rather give the waterto our stock holders for their citrus fruits.

Q You have always had plenty of water right along from the wells,- It is only a question of pumping?

A It is a question of pumping; we were not equipped to pump to thesurface of the ground, and we didn't think it would pay to install an auxiliary pump to pump the water

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to the surface.

Q It would require some pipe to be put in would it?

A We would have to extend our discharge pipe to the surface of the ground, and then construct a ditch or flume to carry the water away from the well and distribute it.

Q What kind of care does thecompany give those vines? Do they cultivate themand look after them?

A We cultivate them every year; prune them and cultivate them.

Q Just once a year?

A They are cultivated several times, whenever it is necessary through the season, until near time for harvesting the crops.

Q But you haven't noticed any drying up of the crops on the company's grapes?

A Well, yes, they do sometimes.

Q What years did they do that?

A More or less every summer when there comes a hot spell.

Q Owing to the dry hot wind isn't it?

A Yes, sir; and the vineyard before we acquired it, had been irrigated quite frequently, in the early spring, anyway, and since we have acquired it we have not put any water on it and I believe it has suffered in consequence.

Q Is that the proper time to irrigate a vineyard, in the early spring, in that vicinity?

A It was through so by many.

Q You have lots of water in the early spring, when itis not going to the stockholders, don't you?

A We don't begin pumping till the stockholders require it

for the citrus fruits.

Q That is in May?

A In May, sometimes June; depends upon how late rains we have

Q How early would your stockholders irrigate in the Spring usually?

A That depends altogether on the season's rains; last year we started on the first of May; if I remember right the year before we didn't start till the latter part of May; there were late rains; and we hold ourselves in readiness to begin pumping any time from now on.

Q What is your idea when a vineyard in that vicinity should be irrigated in the spring of an average season?

A Well, that is a question that I can't answer from my own knowledge, really; I have seen in the older times, when there was plenty of water there, some of the older residents that had quite a growth of vineyard, running the water for weeks on it during the winter months, flooding the vineyard for weeks at a time; whether it was the best thing to do or not I don't know.

The Court, Q Did they irrigate them in the summer?

A They continued on them during the summer about once a month.

Mr Burr, Q Then as I understand you, you attribute the condition of the company's vines, to the fact that they were once irrigated, and then irrigation ceased later?

A That is my opinion.

Q If vines are not irrigated from the time they are set in they do well enough don't they without irrigation?

A It depends on the character of the soil; there are many

vineyards in Cucamonga that never have had any water at all and a vine that has not received water usually sends its roots down, goes after water, and a vineyard that has been irrigated don't do that at first, and when the water is taken away I believe it suffers injury.

Q Well, isn't it a fact that vines will adjust themselves to those conditions in time?

A That I couldn't say.

Q How long have you had experience with vines?

A About 16 years.

Q You have never noticed what the effect of taking water away from vines is, as to whether the effect is permanent or not; in other words don't they adjust themselves to that, and get normal crops after the first two or three years have passed after the irrigation ceased?

A They may, but I wouldn't want to state that for a fact.

The Court, Q Why do you answer the last question as you do? by reason of lack of observation, or because you have an opinion to the contrary?

A Really lack of observation; as I stated before my vineyard does not get much of care, and I haven't paid attention to it and I haven't made a note of it.

Mr Surr, Q You got a fair crop from your vineyard last year?

A A fairly good crop last year.

Q You didn't irrigate that year at all?

A No, it has not been irrigated for ten years.

Q Now, you spoke about the present cost of pumping and distributing that water to be $9.50 for 24 hours?

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A Yes, sir. about that.

Q Does that include the entire expense of the company, such as office expense, and interest on indebtedness?

A It includes the entire expense with the exception of interest on a small indebtedness we have.

Q It includes all other expenses?

A All other expenses.

Q Did you ever figure out how much it cost per acre to the stockholders, irrigated acreage?

A I may have done so, but I have forgotten, if I did.

Q How often do your stockholders irrigate down there, the stockholders of your company?

A About once in every 32 days, if we have no breakdown of machinery; it takes about that time to get around.

Q And that calculation of your cost, includes all repairs for keeping the plant up in first class shape, doesn't it.

A Yes, sir.

Q That includes the zanjero's wages, too?

A Yes, sir.

Q What do you pay your zanjero now?

A We paid him last year $70 a month during the irrigation season, for looking after thextwo pumps and tending to them and turning on the water; he sleeps at the plant and is there day and night.

The Court, Q Do you mean he did the work of the engineer also?

A We have two electric motors and he tends to them; he does all the work unless there is some repair work needed.

Q You spoke about the construction of three and a half

miles of pipe: Do you mean to say the lands of some of the stockholders are that far from the wells?

A Yes, sir; our extreme southerly stockholder on Archibald Avenue is from two and three-quarters to three miles from the well.

Q How many shares of stock have you?

A I have 120.

Q How many acres of land do you irrigate under that stock?

A I am irrigating now ten acres.

Q How much goes with each share?

A Each 40 shares represents a head of water the way we have it divided up; that is a head of water of the regular heads.

Q And that run is something over 56 inches now is it?

A Last year we pumped 52 inches from the two wells combined on an average for the season.

Q It is a fact that many of your stockholders rent water if they can get it from other sources? In other words they have not enough to go around with what they have now?

A Some of them do; some of them rent.

Q That 56 inches is barely enough to go around the 600 acres under the system?

A If they didn't have water from other sources they wouldn't have enough; as I said before there are quite a few that have water from other sources.

Q And they also claim water rights to an additional supply from other sources do they not, some of them?

A Those that are stockholders of the Cucamonga Water Company have water from that source; and there are two in our Company

that belong to the Old Settlers' Company; and they get water from that source; and there are stockholders of the Sunset Water Company that belong to the unfortunate Class B that had water coming from the Springs in the olden times; when the springs dried up they got no more water, and haven't had for about five years; that is why we are in the Sunset Company.

Q Those rights are not entirely abandoned are they?

A No, sir.

Q There is litigation pending?

A Yes, sir; there is litigation pending; we are holding on to them as well as we can.

Q With the expectation of getting that water?

A If we live long enough we may.

Q That is the reason you have not acquired other water in the mean time?

A Well, personally I own a little more shares of stock in the Sunset Water Company than some others, and I have more water than some of the others; but I have planted ten acres and I am wanting to set out ten more and I am waiting for this water to come back before I do that.

Q This litigation that you refer to, I suppose that is the Smith suit?

A The Smith suit; yes, sir.

Q Are the Class B owners that you speak of those who claim under the deed from the Cucamonga Company?

xxxxxxx Mr Britt: Objected to as irrelevant, immaterial and incompetent andnot the best evidence.

The Court: Overruled.

Mr Britt: Exception.

A Yes, those Class B people have their rights by virtue of deeds from the old Cucamonga Company, that is now out of existence; the water was deeded with the land, and the Class B people don't own stock in the company, excepting in so far as some of them have surrendered their rights, and taken stock; some of them have done so.

Mr Britt: The witness's answer is not responsive to the question and I ask that it be stricken out.

The Court: Stricken out.

(Last question read)

Mr Britt: Now, I object to the question in so far as it applies to any persons other than himself; if he has claims there he may describe those, but I don't believe it is competent for him to state what other people claimed.

The Court: Overruled.

Mr Britt: Exception.

(Last question read)

A Yes.

Q Now, don't you know that there is water in those Springs at the present time?

A I have heard that there is some in there.

Q And also on the west side, too of the Red Hill?

A Yes, sir.

Q How is it that you are not getting that water?

Mr Britt: Objected to as irrelevant and immaterial and calling for the opinion and conclusion of the witness.

The Court: There has not been anything to suggest that he knows anything about it; he can answer if he knows; the

objection is overruled.

Mr Britt: Exception.

A I will have to go back and explain a little bit about that: Away back in 1901 and 1902, the water in the Y tunnel and the Creek was practically gone, and the Cucamonga Water Company cut us out, didn't give us any water; and while there is a little water there now we have been waiting for the decision on this Smith Injunction suit to try to get our rights back again; and some of us have thought of going to the Cucamonga Water Company in about a month, and making a demand for what water there is that we are entitled to; I don't know whether we will get it or not.

Q You never made any demand on them yet for that water?

A I have not personally, no.

Q Do you know whether any of the others, who are in the same class with you, in Class B, have made any demand?

A I don't know.

Q You are claiming the waters on the west side of the Red Hill, as well as on the East side?

A I don't care where it comes from.

Q You are claiming the right to that?

A Yes, we are claiming the right to that.

Mr Britt, Q Is it not a fact that those vineyards which were irrigated yielded much larger crops of grapes before the irrigation ceased than they did afterwards?

A What vineyards have you reference to?

Q The vineyards that you described upon which irrigation was discontinued.

A I believe that is true; that they did yield a very much

larger crop.

Mr Surr, Q Did you ever see any larger crop while they were being irrigated than they are yielding now?

A I believe I have.

Q When was that?

A Well, it is 12 years back; on my own place itis about 12 years back since I gave the vineyard any water; and on the company's property it is probably seven years.

The Court, Q Youmspoke about your vineyard, that you had an idea of abandoning it and putting trees in there sometime: are you neglecting the cultivation in any way?

A No, sir; I am taking care of it the same as I always did with the exception of not giving it any water.

Mr Surr: But you don't think that this additional crop that you speak of, would pay you to irrigate, in order to get it again?

A That would depend upon many things; we might get a crop and not get any price for it; that is a factor that enters into it; the Sultana raisin is not a a favorite in the market any more, and brings about the lowest price of any raisin that is sold; that is one reason why I don't care much about encouraging my vineyard or keep it or continue it.

Q Is that the same reason why your company does not keep up its vineyard and irrigate it?

A I think so; we don't think it would pay us to do it .

Mr Britt, Q What do you call the Company's vineyard? A vineyard owned by the Sunset Water Company?

A Yes, sir; we have about eight acres of Sultana raisin grapes.

The Court, Q Is all the land where your wells are situated susceptible of cultivation and irrigation, or is there any wash there?

A No, it is good land; it is suited for cultivation of any kind; the other portion of the land other than the vineyard we rent out for a small sum yearly to raise barley on; it has never had a crop other than that.

Mr Haskell, Q I understood you to say that in 1908, it cost $19.00 each 24 hours, to lift 52 inches?

A $9.00 for about 25 inches.

Q That would make about $19.50 for 52 inches wouldn't it?

A Yes, sir; I presume it would.

Q That would be the only cost to your company, for lifting and supplying this water to its stockholders, with the exception of the interest on the investment: have you taken into consideration the depreciation of the plant?

A No, sir; and you are mistaken about the interest on the investment; the interest I had reference to is interest on a small indebtedness we owe in one of the banks; that is the interest I had reference to.

Q You have not figured in this case the interest on the investment?

A No, sir.

Q And you have not figured the depreciation of your plant?

A No, sir.

Q Are you able to tell us what sinking fund you would have to set aside to offset the depreciation of the plant?

A I wouldn't want to make a statement of that fact now.

Q You know the depreciation of the plant is considerable

do you not?

A I understand that it is; we had that matter up in our board of directors' meeting several times, and we concluded we would just leave it alone.

Q Your pumps are constantly wearing out are they not?

A Yes.

Mr McKinley: Objected to as calling for a matter of common knowledge.

Q And the wells themselves are corroding and rusting away are they not?

A I presume likely.

Q And the casing and pipe lines and conduits will not last forever; they are wearing out are they not?

Mr McKinley: Objected to as calling for common knowledge.

The Court: I think we have just as much knowledge of that as the witness.

Mr Curtis Q You say that you have no record of the water that was pumped during 1902; but at that time you were present were you not, at the well a number of times?

A Oh yes, undoubtedly.

Q And you know of your own knowledge that the well was pumped during the whole irrigating season of 1902?

A Yes, sir.

Q And it was pumped was it during the whole irrigating season of 1902?

A It was pumped.

Q Now, you say that 40 shares of stock in the Sunset Water Company is a head of water, and a head is half the flow from the two wells?

A Precisely.

Q For 24 hours?

A For 24 hours.

Q Now, in regard to this Class B water right, has that since you installed your first well furnished you or any of the stockholders of the Sunset Water Company, any water?

A I think the first part of 1901, before we began pumping or just about the time we were beginning pumping that first well I got something like a six or eight inch head, from the Cucamonga Water Company; but by the close of the season it dropped out entirely.

Q With that exception have you had any since 1901?

A Not any since.

Q Has any other stockholder of the Sunset Water Company to your knowledge got any waterfrom their Class B water right?

A Not to my knowledge.

-o-

H. G. COUSINS

H. G. Cousins, previously sworn, recalled by defendants testified as follows:

Direct Examination.

Mr Curtis, Q I believe you have already testified you are vice-president of the Sunset Water Company?

A Yes, sir.

Q How long have you lived in Cucamonga?

A Since November, 1901.

Q How long have you been acquainted with the Sunset wells?

A I first became acquainted some time in 1902.

Q Do you remember when you first measured the depth of the water in the Sunset wells?

A I think my first measurement was in 1906, but in 1903 when we replaced the centrifugal pump with the deep well pump it was in the Spring of the year, and I had to build a staging to work on, and that staging was about just at the top of the water, and that was 92 feet in depth.

Q 92 feet in depth?

A Yes, sir.

Q You mean 92 feet from the surface of the ground?

A That was from my bench mark that I used for the measurements of the elevations of the wells.

Q You mean it was 92 feet to water from the top of the ground?

A Yes, sir; from the top of the curbing.

Q What is the elevation of the land at that point?

A About one foot lower than the top of the curbing, and that is 1391.55, is the elevation there.

Q Is that well number 1?

A Yes, sir.

Q What is well number 2?

A The elevation of the top of the curbing is 1395.5; that the elevation of the ground is I don't know exactly in comparison with that.

Q You don't know how high the curbing is?

A The ground is built up around the curbing, and the curb is two feet above the ground as it stands now; it is probably about four feet above the original level ground.

Q Were you present and did you have charge of the sinking

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of the Sunset well number 2?

A Yes, sir.

Q I believe you also put in evidence the log of the well?

A Yes, sir.

Q What was the depth to water? What depth did you strike water in that well number 2?

A 92 feet from the top of the well casing.

Q Did you measure the water in the well when it was finished.

A No, sir; they sunk the shaft after the drilling was done and I measured it then.

Q What was the height of it then? What was the depth to water then, after the drilling was finished?

A The shaft was 93 feet to water then, at that stage of it.

Q Then was there any rise of the water in that well, from the time you first struck it, until the time you finished it?

A I think not.

Q You were not there when the first well was dug?

A No, sir.

Q Have you made any measurements as to the height of the water in certain wells situated in the Cucamonga Red Hill District, during the last few years?

A I have.

Q I will ask you whether you have prepared them in the shape of a tabulation?

A Yes, sir.

Q And is this tabulation that you have in your hand now a representation of the measurements you have made?

A Yes, sir; I think it is a correct copy of my original notes.

Q How will you explain to the Court what it means? What does the first column mean?

A I have on the lefthand margin of the sheet, there is a column of dates, and it is headed with the word "date"; and across the top of the sheet there are several columns with their headings standing for the points at which the measurements were taken; for instance the first column is marked "C.W.Co. well, 90 A tract" No.2" standing for Cucamonga Water Company well, 90 acre tract; and number 2 refers to the numbers ~~fxf~~ of the wells on Plaintiffs' Exhibit 77.

The second column is marked and headed "S.A.W.Co. well No. 14", standing for San Antonio Water Company well number 14, as marked on plaintiffs Exhibit 77. And so on across the top for the different wells.

Q I expect you had better explain them all, if they have different designations.

The Court: So far as the designations are concerned, dealing with the wells, I suppose they all refer to numbers as given there on Exhibit 77, Mr Cousins?

A Yes, sir.

Q S A W Co means San Antonio Water Company?

A Yes, sir.

Q And C. W. Co means Cucamonga Water Company?

A Yes, sir.

Q Now, beyond that what are the designations and what do they stand for? You have "West Hellman well", for instance, what is that?

A The one marked West Hellman well, that has been designated as Hellman number 2, or well at the end of the west

branch of the Y tunnel.

And I have the next column, C.W. Co's Star well No.6; that is the number referred to on Exhibit 77; and the next column is "C.W.CO, lower star tunnel", that is the long tunnel of the Lone Star system.

Q What does the lower indicate?

A One tunnel is above the other. The tunnel that connects with well number 6 is a short tunnel, and that has a higher elevation than the lower tunnel; the lower tunnel empties on Hellman Avenue at weir number 7.

Q Go on and complete the explanation.

A In the next column is "C.W. Co Well M" - that is the well on the 60-acre tract belonging to the Cucamonga Water Company.

Q As shown on Exhibit 77?

A As shown on Exhibit 77. Sunset well number 1; Sunset well number 2, Old Settlers well; Hermosa Water Company well and well number M marked "M" on Exhibit 77,

The next column is headed "Hermosa Water Company's well, not on any of the exhibits; it is located a mile and an eighth north of base line, on the west side of Hellman Avenue, in the Cucamonga Homestead association tract.

Q How far west of Hellman Avenue?

A About 50 feet.

The next column is headed "Seepage Water E. Branch Creek" That is the highest point that I could find the water coming out of the ground on the east branch of Cucamonga Creek.

The last column is headed "Upland Water Company Well." Signifying the Upland Water Company's well.

The Court: Q Mr. Cousins, one thing in regard to the next tp the last column, "Seepage Water." You say that was the highest point at which you found water seeping. Here you have a series of dates and many blanks. Does that mean that you found no water seeping on the blank dates?

A No, sir; the blanks indicate that I didn't take measurements.

Mr. Curtis: Q I see the first column to the left is "Date". What do the figures represent in the other columns?

A The figures opposite the dates and in xxx xxxxx xxixxxx the columns under their several headings represent the elevations in feet above sea level.

The Court: Q Actual, or from some datum plane?

A From a datum plane which I assumed at a point as a bench mark at the intersection of Base Line and Hellman Avenue.

Q Do you know how it corresponds with the datum plane used by the other engineers?

A No, sir; I do not. I believe that the elevation of the point that I assumed is slightly higher than it is designated on Map 77.

Q Can you tell us how much?

A No, I cannot. I have never been able to find the iron pipe which marks the section corner, and it was at that place supposedly, and the grading of the road covered it up, and

I took it that the surface of the road was .5 of a foot higher than the top of the stake. That is as near as I could make it.

The Court: It would seem that to be of any value in regard to those measurements we ought to have that.

Mr. Haskell: Q This is the same datum plane to which you have testified already?

A Yes, sir.

Q And at this datum plane could you give the surface elevation at any of those 16th Street wells? From your datum plane have you made memorandum of the surface elevation of any of the 16th Street wells?

A I have the elevation of the top of the curbing of all the 16th Street wells.

Mr. Haskell: That will give a comparison.

The Court: I assumed that if the witness couldn't give the difference we couldn't.

Mr. Haskell: But he can, if he has the elevation of the others. Can you give that? The elevation of the surface of the ground at 16th Street wells?

The Court: Which one?

Mr. Haskell: Any one or all of them.

A I have another elevation at a substantial point, and that is the top of the pipe in the West Hellman well as compared with the elevation of the surface, given on exhibit 77; and that elevation is 45-- It is designated on plaintiffs exhibit 1. exactly the same as my elevation of the top of the pipe in the West Hellman well.

The Court: Then if the other engineers are correct, you all

use the same datum, substantially.

A It seems so.

Mr. Curtis: There is only 1 foot difference between 77 and 1.

Mr. Haskell: You said you couldn't give the elevation of the top of the ground at the 16th Street wells:--

A Well no. 5, the elevation of the top of the curbing according to my figures is 1479.37. That curbing is 20 inches above the surface of the ground as it is graded off around the pump.

Q Can you give your other marks at the other wells?

A Well no. 3 the elevation of the top of the curbing is 1484.25 feet, and the top of the curbing is one foot above the surface of the ground around the shaft.

Mr. Curtis: We now offer in evidence this tabulation of measurements as prepared by the witness.

The Court: Those were all measurements made by yourself personally?

A Yes, sir.

Mr. Britt: Comparing his statement of his elevations with what appears on exhibit 1, with the elevation of San Antonio Water Co's well 5 and 3-- at any rate, 5-- there would seem to be a difference of some 14 or 16 inches between the elevations and those given here. We have no objection to the receipt in evidence of the tabulation.

The following is a copy of said tabulation:

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Date

April 10-0
April 11-
April 12-
Dec. 2[illegible]-0
Jan. 29-0
Feb. 9-0
Mar. 19-0
April. 4-0
May 10-0
May 20-07
June 10-0

April 1-0
April 6-0
April 8-0

April 17
Aug. 27-
Sept. 1-
Sept. 2-
Oct. 23-
Oct. 24-
Oct. 25-
Dec. 12-
Dec. 13-
Dec. 14-

Mar. 7-0
Mar. 13-
Mar. 14-
April 3-
April 10

ye

ak-

29

the column San Antonio Water Company well no. 5, we have the

Date	C.W.Co. well. 90 A.Tract #2	S.A.W.Co. well #14	S.A.W.Co. well #1	S.A.W.Co. well #2	S.A.W.Co. well #3	S.A.W.Co. well #4	S.A.W.Co. well $5	S.A.W.Co. well #6	S.A.W.Co. well #7	West Hellman well	C. W. Co. ~~Star~~Well #6	C. W. Co. Lower Star Tunnel	C.W.Co. well #K	Sunset well #1	Sunse well #2
April 10-06	1333.	1293.94					1346.27		1345.36	1344.5	1343.82	1308.8	1302.		
April 11-06														1301.5	1303
April 12-06															
Dec. 2-06	1336.	1293.94					1350.37		1348.36	1346.5					
Jan. 29-07		1306.94					1351.87		1349.86	1347.5					
Feb. 9-07		1322.44					1353.87		1351.36	1349.					
Mar. 19-07		1336.94					1358.87		1355.36	1353.					
April 4-07		1329.94					1362.37		1358.36	1355.					
May 10-07		1332.94	1375.93	1370.61	1369.25	1367.47	1367.87	1365.11	1362.86	1359.					
May 20-07		1321.64	1376.93	1370.86	1369.25	1367.47	1367.87	1365.36	1363.36	1359.75				1300.55	1302
Jun. 10-07		1322.19								1359.75					
April 1-08															
April 6-08														1301.85	
April 8-08	1366.7	1344.34	1416.13	1386.76	1384.15		1380.17		1375.06	1363.45	1368.12	1312.	1302.2		
April 17-08		1344.54													
Aug. 27-08	1355.1	1309.44													
Sept. 1-08															
Sept. 2-08		1307.44					1366.77		1367.66	1363.45					
Oct. 23-08												~~1288.2~~		1287.05	
Oct. 24-08										1359.6	1355.52	1288.2			
Oct. 25-08		1301.o4					1365.97		1364.26						
Dec. 12-08												~~1296.~~			
Dec. 13-08	1351.2	1329.44	1382.73	1373.06	1370.25	1367.37	1367.47		1363.46	1358.2	1357.42	1296.			
Dec. 14-08														1290.75	
Mar. 7-09											1368.42	1322.		1303.85	
Mar. 13-09															
Mar. 14-09		1349.34	1402.o3	1384.86		1380.07	1380.17		1374.36	1363.45	1369.02	1323.		1304.55	
April 3-09		1351.04	1405.03	1386.56		1381.47	1381.77		1375.96	1363.45	1371.12	1328.4		1307.07	1307
April 10-09	1368.6	1351.64	1406.64	1387.06	1385.05	1382.17	1382.27		1376.56	1363.45	1371.92	1339.		1307.65	

Mr. Curtis: Q Mr. Cousins, have you made some comparisons of these different elevations as shown on the tabulation which has just been admitted in evidence, and prepared them in the form of a tabulation?

A I have taken the elevations on certain dates and the elevation at different points on that date and obtained the differences and tabulated them.

Q Is this the tabulation that you have prepared?

A Yes, sir.

Q What does it represent? Will you explain it to the Court?

A I have it headed "Differences in elevation of water in feet in West Hellman well and water in wells under their respective columns." As an explanatory note, I have "The negative sign indicates that water in well is below that in Hellman well no. 2." On the left hand side of the sheet I have a column headed "Date" and in the different columns there are headings running across the sheet, and the first column is headed S.A.W.Co. No.5, standing for San Antonio Water Company's no. 5; the second column, "S. A. W. Co. no.7"; the third ~~column~~ column C. W.Co.no.6; the fourth column Lone Star Tunnel. That is the lower Lone Star Tunnel. The fifth column, Sunset W. Co. No 1; sixth column, Hermosa Water Co.; seventh column, Old Settlers Water Co.; eighth column S. A. W. Co. well no.14.

Q What do the figures indicate in each of these columns, taking first the second column?

A They indicate the differences in elevation of water as designated under the heading. For instance, in the first line of figures we have a date April 10, 1906, and under the column San Antonio Water Company well no. 5, we have the

figures 1.77, which indicates that the water in well no. 5 stands 1.77 feet above the water in Hellman well no. 2. on that date

Q And so on in the whole tabulation?

A Yes, sir. With the negative sign opposite the figures where the water stands lower than the water in the Hellman well no. 2, as explained in the explanatory note in the heading.

Q What would this mean: under the San Antonio Water Company well no. 14, of the date April 10, 1906, minus sign 50.56?

A That would indicate that the water in well no. 14 was 50.56 feet lower than the water in Hellman Well no. 2.

Q You have two or three notes on this. What do they indicate?

A At the foot of the sheet I have the words "Note" and thereafter I have "On April 8-08 Y Tunnel flowing 22.3 inches."

Q What does that indicate?

A It means that the water issuing from the Y Tunnel and measured over a weir about 300 or 400 feet south of where the two branches of the Y come together measured 22.3 inches

Q What is that taken from?

A My own measurements.

Q What is the second note?

A "On September 2 Y Tunnel flowing too small to measure."

Q Was tat a measurement made by you?

A Yes, sir.

Mr. McKinley: It was a measurement that was not made.

A It was dripping a small quantity of water.

"On March 14, -09, Y Tunnel flowing 21.9 inches."

Q What does that mean?

A It means that on that date the water measured over that weir 29.9 inches.

Q 21, isn't it?

A 21.9.

Q That is a measurement made by you?

A Yes.

Q And the next note?

A "On April 3-09 Y Tunnel flowing 26.4 inches." And the next note, "April 10-09, Y Tunnel flowing 29 inches."

Q Those two last are measurements made by you, are they?

A Yes, sir.

Mr. Curtis: We offer this tabulation in evidence.

Mr. Haskell: I would like to ask one question for explanation: The witness refers to one of his columns as being marked the lower Lone Star Tunnel. I would like to ask what point or what it is in connection with the tunnel the elevation of which is given in that column.

A Points of measurement-- I have taken two different places here according as it suited my own convenience, according as the water was backed up by the bulkhead. Presumably it stood on a level and a measurement at any point along the tunnel would give the elevation of the tunnel, provided I knew the elevation of the bench mark at the place I took the measurement.

Q Then the figures in that column indicate the elevation of the water as backed up in the tunnel by the bulkhead, A. Yes.

The following is a copy of said tabulation.

Differences in Elevation of Water in feet in West Hellman Well and Water in wells under their respective columns.
(The negative sign (-) indicates that water in well is blow that in Hellman Well No. 2.)

	S.A?W.Co. #5	#7	C.W.Co #6	Lower LongStTun.	Sunset W.Co. #1	Hermosa W.Co.	Old Settlers	S.A. W.Co. Well14
pril 10-06	1.78	1.86	-.78		-43.45	6.58	-59.7	-50.56
ec. 23-06	3.87	1.86						-52.56
an. 29-07	4.37	2.36						-40.56
eb. 9-07	4.87	2.36						-26.56
ar. 19-07	5.87	2.36						±16.06
pril 4-07	7.37	3.36						-15.06
ay 10-07	8.87	3.86						-26.06
ay 20-07	8.12	3.61						-38.11
une 10-07								-37.56
pril 8-08	16.72	11.61	4.67	-51.45	-61.6	-6.87	-78.15	-19.11
ept.2 -08	3.32	4.21				-7.47	-95.39	-56.01
ct. 24-08	6.37	4.66	-4.6	-71.4	-72.55	-2.62	-88.74	-58.56
ec. 13-08	9.27	5.26	- .78	-62.2	-67.45		-83.04	-28.76
ar. 14-09	16.72	10.91	-5.57	-40.45	-58.9		-75.39	-14.11
pril 3-09	18.32	12.51	7.67	35.05	-56.4		-72.09	-12.41
pril 10-09	18.82	13.11	8.47	-32.55	-55.8		-71.39	-11.81

ote:- On April 8-08 Y Tunnel flowingx 22.3 inches

" Sept. 2-08 " " too small to measure

" Mar. 14-09 " " 21.9 inches

" April 3-09 " " 26.4 "

" April 10-09 " " 29. "

Mr. Haskell: Q From what was this compilation made?

A From the elevations which I have just explained.

Q Elevations that have been testified to in this case?

A Yes, sir; my own elevations.

Mr. Curtis: Q Did you make any other tabulation showing a comparison of the rise of the water level in certain wells, the measurements of which are laid down in this first tabulation?

A Yes.

Q Have you that tabulation?

A Yes, sir.

Q Will you explain it to the Court and counsel?

A It is entitled or headed "Rise of water level in feet in enumerated wells from and to dates given in the different columns." In the left hand column headed "well" I have the different wells designated by their proper number and title and across the sheet at the top I have the dates. For instance, in thefirst column it is headed A pril 10-06 to January 29-07. The second column is January 29-07 to A pril 8-08. The third column, A pril 10-08 to April 10-09.

Q Are all of those dates strictly correct? Did you make measurements exactly on that date represented here, or did they represent the nearest date on which measurements were made?

A All but two or three of the measurements correspond to those dates-- two or three of the differences correspond to those dates as given. I think there is one instance where there is 4 days difference.

The court: The tabulation shows the dates?

A Yes,,sir.

Mr. Curtis: Q If you didn't have a measurement on the date you took the nearest one that you had in preparing this tabulation?

A Yes, sir.

Q What do the figures represent in the second column?

A For instance, opposite thepoint well no. 5 as indicated in the left hand column and under the heading A pril 10-06 t January 29-07 are the figures 5.6, which indicate that the rise of water in well no. 5 was 5.6 feet between those two dates and inclusive of those dates.

Q And the figures in the other columns represent the same thing?

A Yes, sir.

Q That is, it is the rise of the water in the wells opposite the number of the wells between the dates specified in the several columns.?

A Yes, sir.

Q And you have some notes attached to that: What are they?

A Marked "Note: No pumping of 16th Street wells during 1906." That is, to the best of my knowledge

Q Was that note made from your own knowedge?

Yes, sir.

Mr. Mckinley: The record shows that.

Q What is the next line?

A "Pumping of 16th Street wells two or three months during year 1907." That is also from my own memory, but I have referred to page 2477 of the transcript.

Q What is the third note?

A January 29, 07, is the date of the first closing of the bulkhedd in the Eady Tunnel."

Q Where do you get that from?

A That is from my own knowledge.

Q You know that is the fact, do you?

A Yes, sir; to the best of my knowledge.

Q You have another note there, have you?

A Yes.

Q Please explain that.

A Lone Star bulkhead first closed fall 1904 and each winter thereafter.

Q What do you take that from?

A That is from my ownknowledge; my memory.

Q You visited the tunnel during that time and know that it was closed during that time, do you?

A Yes.

Q Proceed with the next note.

A Water from Ioamosa Water Company poured into Lone Star Tunnel spring 1909. Measurements. March 7-09, 50 inches. These measurements are as near as I could get them with the apparatus on the ground to measure the water.

Q Were they measurements made by you?

A Yes, sir; they may not be strictly correct, but they are pretty near. April 3, 1909, 50.9 inches.

Mr. Britt: Q That is from what?

A That is the water from the Ioamosa Water Company poured into the Lone Star Tunnel. April 10, 1909, 60 inches.

Mr. Curtis: Q Those three measurements were made by you. Yes.

Mr. Curtis: We offer that tabulation in evidence.

Rise of Water Level in feet in Enumerated Wells from and to dates given in the different columns.

ell	Apr.10-06 to Jan.29-07	Jan.29-07 to Apr.8-08	April 10-06 to Apr.8-08	Apr.8-08 to Apr.10-09	
W. #5	5.5	28.3		2.1	
#7	4.5	25.2		1.5	
#14	0.	50.4		7.3	
t Hellman well	3.	15.9		0	Water flowing from Y Tunnel
Co.#6			24.3	3.8	
Tunnel			3.2	18.9	Bulkheaded
et #1			.8	5.8	
ettlers			.5	6.76	
osa W.Co.			5.5		

:- No pumping of 16th Street wells during 1906

Pumping " " " " two or three months during year 1907 see page 2477 of Transcript.

January 29-1907 is the date of first closing of the bulkhead in the Eddy Tunnel

Lone Star Tunnel bulkhead first closed fall 1904 and each winter thereafter.

Water from Iosmosa Water Co. poured into Lone Star Tunnel Spring 1909

Measurements

Mar 7,09	50"
April 3-09	50.9
April 10-09	60

Q Have you made any other measurements besides those shown on the tabulations? I believe you made some measurements in the last few days.

A On April 14, 1909, the elevation of water in well no. 3 of the San Antonio Water Company was 1385.15.
On April 14, 1909, elevation of water in well no. 5 of San Antonio Water Company was 1382.57.
April 14, 1909 , elevation of water in well no. 7 of San Antonio Water Company, 1378.86x.
And on the same date the weir measuring the water from the Y tunnel, 31.3 inches.
The same date, the water flowing over weir no. 8 or the Creek Division Box, was 53.5 inches.
The seepage water in the east branch of the creek was at the same place as it was March 13, 1909, as near as I could tell.

Mr. McKinley: Q Was that seepage water included in the other measurement, that is, the measurement in the Creek Division Box includes the seepage?

A Yes.

Mr. Haskell: You refer now to where the seepage occurs first in the creek-- the highest point up the creek?

A Yes, sir.

Mr. McKinley: What was the seepage water the last time you measured it?

A March 13, 1909, 1350.78.

Mr. Curtis: Q That is all the measurements you have?

A That is all I have that have not been given before.

Mr. Britt: I would like to interrogate Mr. Cousins after

the exhibits have been extended into the record, when I can do it to a good deal better advantage.

Cross Examination.

Mr. Haskell: Q You are acquainted with the plant of the two wells of the Sunset Water Companyx., their pumps and pipe lines, are you?

A Yes, sir.

Q What would you estimate to be the natural depreciation in value of those plants?

Mr. McKinley: Objected to as not cross examination.

The Court: Sustained.

Mr. Britt: Q A bout these Sunset wells, Mr. Cousins, did you make any measurements when you first began to observe the well no. 1? I think you stated it was in 1902-- the measurement of the quantity of discharge.

A No, sir.

Q And you stated, I think, the depth to water of that well?

A Yes, sir.

Q 92 feet, or something of that sort?

A Yes, sir.

Q But you never measured at that time the quantity of water pumped?

A No, sir. I have only a general knowledge of that. I was using the water on the placex.

Q You were using water for your own placex for irrigation in 1902?

A Yes, sir.

Q Do you know how the discharge of water from that well in 1902 compared with that of 1903?

A It was more.

Q Did you at any time take measurements of the discharge of the water from that well before no. 2 began to be pumped?

A I think probably I did. I never made any note of it.

Q Did you note whether the water rose in well no. 2 above the point where it was first struck in drilling the well?

A I never made no accurate measurements of it, but my observation and from the sinking of the shafts, of there was any raise it was so slight that I never knew it.

Q You mean that if there was any it was so slight that you didn't notice it?

A Yes; in what measurements I did make at the time of construction .

Q Did you notice at any time in thepumping of either of those wells the extent to which, if at all, the water declined in pumping?

A The only knowledge I have of that is the action of the pumps. In no. 2 well the pump is in the neighborhood of 140 feet from the surface, and when we first started up it was geared to pump 40 inches or slightly over, and in less than an hour's time or in about an hour's time the pump began to pump air, so I know the water plane in the well must be somewhere in the neighborhood of the bottom of the pump-- 140 feet from the surface-- in round numbers.

Mr. Britt: I think that is all I want to ask Mr. Cousins now. I shall want to question him somewhat further about these measurements.

Mr. McKinley: Have you got thebook there from which you got the log when you were examined before?

A No; I have a copy of it.

Q Is that the same thing that you read from?

A I think I read from the book that has the original.

Q Will you refer to your log? "305 to 320, gravel." In well no. 2.

A Yes.

Q Have you a note there with regard to the rise in the well?

A Yes, sir.

Q See what that is and, after refreshing your recollection from that, state whether there was any rise in well no. 2.

A As I remember the way the water was in that well from the start, they had no water at all and we had to use a pipe and pour water into it; and after a while we got some water,--enough to keep the sand pump going, and it kept increasing slightly, and after that we got enough water so that they didn't have to use the supply pipe any more. Then the mark on the rope or a string tied around the rope had the water level when the sand pump would strike the water in the morning when they first began to drill. That was at the time they were pretty well down; and when they struck that point after drilling all day and the water standing in the well over night, they noted a rise in the well and they showed it to me and I saw it too.

Q Then there was some rise?

A There was a rise from where the water was where they were ~~[illegible]~~ bailing it out. I didn't mean to say it was above the original.

Q What does your note say?

A "There was a slight rise in the well while drilling."

Q Do you remember your testimony before in regard to that?

I will read it to you from page 2048, first beginning with line 3: "305 to 320, gravel. And at this point there was some extra water appeared. There was a slight raise in the well while they were drilling.

"Q Is that the first appearance of additional water to what you spoke of before?

"A Yes, sir."

Then omitting down to line 13:

"Q Was it a considerable quantity?

"A There was a slight rise but we didn't measure it. It was just noticeable."

and again on line 25,

"Q Did the water rise any in that well?

"A Not to speak of, only at that point that I mentioned here, there was a slight rise."

Do you remember that testimony?

A That is the way I put it.

Q There was some little rise.?

A Oh, that is away down below where we first struck it if I remember correctly.

Q You say you measured within the last few days the water in the Y Tunnel?

A Yes.

Q At what point did you measure it?

A It is at the mouth of the open cut.

Q Whereabouts was that water going to?

A I don't know.

Q Did you see it go into a pipe line?

A It went into a pipe line at the end of the box.

Q You made a measurement of the springs also?

A Yes, sir.

Q Did you see where that water went to?

A I turned it into the box myself.

Q Where was it running?

A Down the Creek.

Q Where to?

A I don't know.

Mr. Goodcell: Q In your table of elevations of water in the various wells put in a few minutes ago you have an elevation of water in the lower Lone Star Tunnel: What was the condition of the bulkhead in that tunnel at that time as to being closed?

A I think with the exception of two or three measurements it was closed.

Q Did you make any personal observation as to the condition of the bulkhead?

A No, sir.

Q Do you know how long before that bulkhead had been closed?

A No, sir.

Q Do you know during what length of time it had remained closed?

A No, sir.

Q You simply took the measurement as you found it at the time?

A Yes, sir.

Mr. Haskell: Q I wish you would give your bench mark at

~~the xxxxx~~ each of the 16th Street wells at the top of the ground, and the elevation of the same.

A Well no. 1 the elevation of the top of the curbing was 1492.43 feet. I believe the top of the curbing is about two feet above the top of the ground at that point.

Mr McKinley: I move to strike that out on the ground that it is a guess.

Mr. Haskell: It is immaterial whether it is in or out, because--

The Court: Put it out then.

A Elevation of top of the curb at well no. 2 of the San Antonio Water Company is 1486.86 feet.

Well no. 3 of the San Antonio Water Company the elevation of the top of the curbing is 1484.25 feet.

Well no. 4, the elevation of the top of the curbing was 1482.47'

Well no. 5, 1479.37

Well no. 6, elevation of top of curbing 1460.61.

Well no. 7 elevation of top of curbing 1461.86

Q Have you no. 8?

A No, sir.

Q I wish you would give no. 1 once more? I may have gotten it wrong.

A 1492.43.

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F. E. TRASK.

(Cross Examination resumed.)

The Witness: On page 92 of the transcript, of date October 7, 1905, the elevation of well no. 1 as stated, 1321.0 is correct, according to my notes.

The measurements given on page 512 showing the amount of water pumped at well no. 8 as 91.2, and well no. 3 as 60.8, of date June 23, 1903, are correct. But on page 2469, as Judge Britt suggested, the 60.8 inches is in the wrong column It should be in the column marked 16th Street well no. 3. It seems to have been an error in copying.

Mr. Britt: Q The tabulation should show 91.2 instead of 60.8?

A Yes, sir; of date June 23, 1903.

The length of the Chinese Springs weir is 12 inches.

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Here the Court takes a recess until to-morrow, April 16, 1909, at 10 o'clock a.m.

--------ooOoo---------

J. W. McKinley.

IN THE

Superior Court

OF THE

County of San Bernardino

State of California

Cucamonga Vineyard Co.,

Plaintiff

vs.

San Antonio Water Co.,

Defendant

Vol. 54.

Friday April 16,1909.

I. BENJAMIN, Official Reporter

Friday, April 16, 1909. Fifty-Fourth Day.

F. C. Finkle.

F. C. Finkle, heretofore sworn and examined, being recalled for further cross-examination, testified as follows;

Cross Examination.

By Mr. Waters: Q Are we to understand from you that the occurrence of the making of this fold on the south side was contemporaneous with the uplift of the main mountains?

Mr. McKinley: Objected to on the ground that it has already been covered by cross-examination and examined into by this counsel and three or four others.

The Court: The objection is overruled. I don't know of any way of drawing the line on this cross-examination.

A That is the way you understand me, Mr. Waters.

Q Then it is not a fold caused by the subsidence of the main mountain after the uplift?

A No, sir. It is a fold caused by lateral pressure from both sides which made the two folds, the main mountain range and the Red Hills, at the same time.

Q Then you would not call it a secondary fold?

A Yes, it is a secondary fold, because it is secondary in importance to the main mountain range.

Q And not secondary in point of time?

A Not secondary in point of time. Only secondary in size and importance.

Q Do you entertain the opinion that stratification beneath the surface is more uniform and even than stratification at the surface?

A Are you referring to the recent alluvium?

Q

Q Either.

A Well, the farther you go below the surface the more even will be the stratification, for the reason that the grades were flatter on which it was laid down. So that even in the recent alluvium, the lower you go down the more even would be the stratification, and particularly when you go into the ancient alluvium, when the slopes on which it was laid were very much flatter than they are now, the stratification is very much more regular.

--0--

(Cross Examination resumed).

Mr. Britt: I am quite satisfied that the statement which I made yesterday afternoon reported at page 4008 of the Reporter's transcript, to the effect that the elevations of water in the various wells stated by Mr. Cousins when compared with the elevations given by other witnesses in the case, and with reference, perhaps, to an assumed datum plane somewhat different, is incorrect; that I overestimated the difference and said fourteen to sixteen inches. Further observation has convinced me that that is greater and probably materially greater than the actual difference. I will inquire of the witness whether he has taken any pains to reduce his elevations to the standard of the elevations appearing on the exhibit 1 and Exhibit 77, and other exhibits here which show elevations of ground or of water-plane, so that he is able to say what the difference is, if any at all.

A No, sir; only in a general way.

Q Of course, it is immaterial as regards comparisons with your own figures, but as regards comparisons with elevations given by other witnesses, it is desirable to know exactly or as near ~~exactly~~ exactitude as possible, just what the difference is between the elevation of your assumed datum and the elevation of the datum on which other measurements have been made in the case.

A In running theline of elevations, after having finished my work, and since this map 77 has been placed on the board, I have noticed several different points where my elevations

and the elevations on the exhibit are pretty near the same. I haven't changed my work in any way that I know of.

The Court: Q You say they are pretty near the same: Are they exactly the same?

A In one or two instances they are exactly the same, and in one or two instances they vary a tenth of a foot.

Mr. Britt: Q Is that as great a range as you have found?

A I think there is one instance where there is nearly half a foot difference. I don't know exactly where it is now. I don't remember.

Q In the tabulation, Mr. Counsins, prepared by you and introduced in evidence yesterday, I find in the Reporter's transcript at page 4889, the first well mentioned is C W Well 90-acre tract No. 2: I suppose that means Cucamonga Water Company's well No. 2?

A Yes, sir.

Q Where is that well situated? Can you point it out on plaintiff's Exhibit 1?

A Located in the north portion of the 90-acre tract, on plaintiffs' Exhibit 1, and it is marked Artesian Well No.2.

Q The well mentioned in the next column "[illegible].Co.Well No.14", is the same well which has been called No. 9 some times by the defendants?

A Yes, sir.

Q The well at the head of the [illegible] tunnel?

A Yes, sir.

Q Have you taken any pains to inform yourself as to the times when the bulkhead in the [illegible] Tunnel has been closed since it was first closed, January 29th, 1907?

A I took particular pains of the date of the first closing at that time.

Q Well, that is January 20, 1907

A Yes, sir.

Q Since that time have you noticed?

A No, sir, I have taken no particular pains.

Q You have kept no record of the times when it was closed?

A No, sir.

Q You have two columns headed respectively "C W Co. Star Well No. 6", and "C W Co. Lower Star Tunnel": Does that first column, C W Co. Star Well 6, mean the Lone Star Well No. 6?

A Yes, sir.

Q And the second column, Cucamonga Water Company Lower Star Tunnel, mean the tunnel which has been called here the Lone Star Tunnel No. 2, or the Lower Tunnel, of the Cucamonga Water Company?

A Yes, sir.

Q Have you the table before you which you testified about yesterday purporting to give the differences of elevation of water in the West Hellman Well and water in other wells, under their respective columns, have you that table before you?

A Yes, sir.

Q By the designation West Hellman Well, do you mean the well at the head of the west branch of the Y Tunnel?

A Yes, sir.

Q It has been called in the evidence Hellman Well No.2?

A Yes, sir.

Q Now, calling your attention to that table, appearing on page 4093 of the transcript, I see for example that in the first line under date April 10, '06, which I suppose means April 10th, 1906 -- is that right?

A Yes, sir.

Q I see that the Sunset Water Company well No. 1 is there stated to show a difference, 43.45, with a dash or minus sign before it: Does that mean that on that date the water in the Sunset Water Company's well No.1 was 43.45 feet lower in absolute elevation than the surface of the water in the Hellman well No. 2?

A Yes, sir.

Q Wherever figures appear on this table preceded by the minus sign, they have the same significance?

A Yes, sir.

Q They are that much below the surface of the water in the Hellman well No.2?

A Yes, sir.

Q Well now, that Hellman well No.2 flows out into the Y Tunnel at an elevation of 1363.45 feet, or about that, doesn't it?

A Yes, sir.

Q Then there is no basis of comparison between wells in the neighborhood anywhere in that part of the country and the waterplane at the Hellman well No.2, as the waterplane may exist in the ground around the well, whenever that well rises so as to flow out at the Y Tunnel? It does not rise any further than that.

Mr. McKinley: Objected to as not proper cross-examination,

and calling for the conclusion of the witness. This witness has not testified to anything except his measurements.

Mr. Britt: I want to get his conclusion.

Mr. McKinley: We submit counsel is not entitled to it; he has not testified as an expert.

The Court: Objection sustained.

Mr. Britt; Exception.

Mr. McKinley: Q You testified to a measurement on April 10th, 1906 of seepage water on the east branch of the creek: how did you locate that seepage water?

A By following up the water in the creek until no more water came out of the gravel.

Q Can you designate the point at which that was, in any way that can be found?

A Describe the place where I found it?

Q Describe the place where you found it if you have a sufficiently definite description to identify it by. I don't care about a general description.

A I don't believe I can on that date. On the next measurement I have a note in my book, May 10, 1907, at a point large rock 25 feet north-east of blazed tree, marked 3-10 in clump of six trees.

Q Where was the seepage with reference to the rock?

A It was a little east of the rock, probably five feet; came out the edge of the bank -- from the bed of the creek.

Q Do you know how far that was from the other point?

A I don't remember.

Q In locating the point the first time, you say you followed the water up until you found that the water seeped?

A Yes, sir; the highest point of the wetness.

Q Did you go above , to see what was a bove in there?

A Yes, sir.

Q All along the creek?

A Yes, sir, clear to Base Line. In fact, I made my levels from Base Line down following the creek.

Q Now, with regard to rain. Do you know how recently it rained previous to April 10th, 1906?

A No, sir, I don't remember.

Q Do you know how long prior to May 10th, 1907, it had rained?

A No, sir, I don't remember.

Q Now, with regard to the third measurement on April 7, 1909? Where was that point?

A xxxxxx March 13, 1909 --

Q March 13? There are only three -- Oh, March 13, that is right. Can you describe that point?

A It is a point on the west border of the creek bed, and it is in the north portion of the trees -- a bunch of trees.

Q How far was that point from the last previous measurement of seepage?

A I don't know, only just about -- probably two or three hundred feet.

Q Did you notice whether there was water seeping at the point that you have seen it on the previous measurement?

A Yes, sir. There was more water there. There was quite a body of water at that point.

Q On this occasion, did you go on up the xcreek?

A Considerable distance; yes, sir.

Q How far?

A Possibly a thousand feet.

Q How recently prior to that measurement had it rained?

A I don't remember. I suppose two or three weeks possibly.

Q Did you observe anything with reference to the lowest point at which water was coming into the creek?

A I couldn't state anything about that.

Q Now, with regard to the elevation of the Lone Star Tunnel well. That opens into the Lone Star Tunnel?

A The upper tunnel connects with a shaft.

Q That is, the tunnel which is bulkheaded?

A No, sir.

Q That tunnel is not bulkheaded?

A No, sir.

Q There is a connection of the Lone Star Tunnel -- it is connected with the upper tunnel?

A Yes, sir.

Q And these points of elevation were below the level of the tunnel?

A Yes, sir.

Mr. Britt: Q In these observations you made of the water seeping into what is called on this tabulation at page 4057 the east branch of the creek, did you notice whether the water was running as a stream at the place where you made your first observation, when you returned and made the second observation in 1907?

A The water was running there but I don't remember itaking particular notice of it.

J. BENJAMIN
OFFICIAL REPORTER
SUPERIOR COURT

L. BENJAMIN
OFFICIAL REPORTER
SUPERIOR COURT

Q Then you stated in answer to a question by Judge McKinley, that there was a considerable body of water at the point where you made the second observation on April 10, I believe?

A May 10.

Q Yes, May 10, 1907. At the time when you returned and made an observation in March, 1909?

Mr. McKinley: I think he said that was with regard to the third and second measurements -- at the time he made the third measurement there was --

Mr. Britt: That is what I said. Was the water of sufficient body to run as a stream at the point of the second observation?

A Yes, sir.

Q When you speak of the branch of the creek, do you mean the creek running through that which we commonly call the Cucamonga Springs on the east side of the Red Hill?

A Yes, sir.

Mr? McKinley: How much water was there at this p;ace where there was a seepage? I don't mean a measurement in inches, but was it just a little moist, or a little water running?

A Just a little water standing. There was no water running at the point that I call the highest point. There was no water running. It was standing.

Q Just standing there?

A Yes; a little puddle.

Q How was it at the point of the second observation at the time that observation was taken?

L. BENJAMIN
OFFICIAL REPORTER
SUPERIOR COURT

A I presume at that time it was running. I didn't look --

x Q I don't mean that. I mean, when you took the second observation, how much water was there at the point which you determined was the highest point of seepage, when you took that measurement?

A If I remember correctly, there was a little puddle there, about as big as your hand, at the very highest point that I could find.

Q When you took the third measurement, how much water did you find at that same point?

A Very much the same condition.

Mr. Britt: From those several points down the creek, did the moist condition prevail or was water standing in similar puddles?

A We didn't have to go but a very short distance below that highest point before the water was running. I was going to state, possibly 20 or 30 feet down the creek.

Re-Direct Examination.

Mr. Curtis: Q You are familiar with the location of the lands of the stockholders of the Sunset Water Company are you?

A Yes, sir.

Q And you are also familiar with the boundary lines of the old Cucamonga Rancho?

A The eastern boundary; yes.

Q That portion of the lands of the stockholders of the Sunset Water Company that received water from the wells of the Sunset Water Company are in the old Cucamonga Rancho?

A All except 20 acres.

J. BENJAMIN
OFFICIAL REPORTER
SUPERIOR COURT

Q Where are those 20 acres situated?

A Situated east of Turner Avenue, and south of the San Bernardino Base Line.

Q Do they adjoin on to the lands of the Rancho?

A Yes, sir.

-0-

Mr. Curtis: That is all of the Sunset Water Company's testimony, except a little matter that Mr. Haskell and I have and I think with other of the defendants too, and we will rprobably stipulate with regard to the documentary evidence. In fact, we have pleaded the pendency of another suit, and that matter will be adjusted by stipulation.

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Mr. Conner: There was a misunderstanding with the abstract company about our documentary evidence, and we will be able to takeit up possibly this afternoon, but likely not till Monday.

The Court: That is, your deraignment of title?

Mr. Conner: Yes, sir.

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S. G. COUSINS.

S. G. Cousins, being recalled on behalf of the defendant, Hermosa Water Company, testified as follows:

Direct Examination.

Mr. Conner: Q Where do you reside?
A Cucamonga.
Q Are you acquainted with the lands of the Hermosa Colony?
A Yes, sir.
Q Do you reside on any of that land?
A No, sir.
Q Is all that land situated within the boundaries of the old Cucamonga Rancho?
A No, sir.
Q How much of it is outside?
A I think there is about half of it -- half a section.
Q And the lands of the company are in one compact body?
A Yes, sir.
Q About how many acres does the colony consist of?
A 640 acres, about.
Q Is that land all planted?
A Pretty near all of it.
Q To what?

A Mostly oranges and lemons.

The Court: Q Could you designate the location of those lands on any of these maps?

Mr. Conner: I don't believe there is anything here -- I don't believe it is covered by those maps.

A I think in defendants' exhibit F there is a section marked 35, and their lands is all of that section except 40 acres in the north-east corner, and there is a correspondent 40 acres at the south-west corner -- All the lands in section 35 except the 40 acres in the north-west corner and an addition of 40 acres on the south-west corner outside of the section. Is that plain?

Q Those are the lands on which the water is used?

A Yes. Section 35 is in township 1 north, range 7 west.

Q Is that land all irrigated?

A Pretty near all of it.

xxxxxxx: Q Thessources of supply of the water of the colony are what?

A They have water from Deer Canyon, and they also have a well.

Q With reference to the colony, where is the Deer Canyon situated?

A North and a little bit east.

Q That water is brought ~~x~~ down how, from the mountains to the colony?

A Through some sort of a pipe line.

Q All the way down?

A Yes, sir.

Q How much of that water does the colony use for irrigation?

A All of the flow in the summer -- during the irrigation season.

Q Then how is this water distributed to the colony?

A By means of pipe lines radiating from a division-box situated at the north end of the colony.

Q To the stockholders of the colony or residents of the colony.

A Yes, sir.

Q Is that water used for any other purpose than irrigation?

A Domestic purposes.

Q And how is the domestic water distributed?

A It is taken out of these radiating lines.

Q About how much of pipe line is required to distribute this water, if you know?

A I don't know the length of it exactly; There is in the neighborhood of two or three miles of pipe lines from the box and there is in the neighborhood of four miles north of the box to the canyon.

Q Are you familiar with the values of land in that colony?

A Not particularly so; only in a general way.

Q Have you dealt in any land there or about there recently?

A No, sir.

Q Do you know where the well of the Hermosa Company is situated?

A Yes, sir.

Q Where is that?

A That is situated in the north-east corner of lot 6, Block 7 of the Cucamonga Homestead Association.

Q What portion of the colony is that?

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A That is outside of this colony land.

Q At what corner of the lands?

A North-west; more west than north.

Q Are all the measurements that you have made of that well given on this table that you have prepared yesterday?

A Yes, sir.

Q How is this water gotten to the distributing system of the colony?

A Through a pipe line from the pump.

Q To where?

A To this distributing-box.

Q And distributed with the water from the creek?

A Yes , sir.

Q Is this lot on which you say the well is situated adjoining to the colony lands?

A Yes, sir.

Cross Examination.

Mr. McKinley: Q You say they get water from Deer Canyon?

A Yes.

Q How do they take water from Deer Canyon?

A They have a pipe line from Deer Canyon down to their distributing box.

Q Do they take water out of the surface flow?

A Yes; and they have some tunnels up above in the canyon.

Q Are you acquainted with the tunnels?

A I have been in most all of them.

Q How many tunnels have they there?

A Three that I know of.

Q Do you know when they were put in?

A No, sir.

Q How long ago did you see them there?

A Two or three years ago. I have been up there twice.

Q Do you know of any changes in them since you have been there?

A No, sir.

Q How large are the tunnels?

A The lower tunnel is quite a long tunnel. I had a measurement on it once.

Q About how long is it?

A Four or five hundred feet; possibly more.

Q Where does it run, with reference to the stream?

A It runs through the point of the hill, and the north end of the tunnel is under the bed of the creek.

Q Then you say there are two other tunnels?

A Two other tunnels further up the creek'.

Q Will you describe them?

A They are nothing more than short tunnels, as I recollect it.

Q Well, about how long?

A I don't know as I was in either one of the upper tunnels. inside of them.

Q How far up the bed of the canyon are they?

A Why, it is a mile, I think, to the first one or such a matter.

Q You don't know when they were constructed either?

A No, sir.

The Court: Q What is this stream you speak of, a stream in Deer Canyon?

L. BENJAMIN
OFFICIAL REPORTER
SUPERIOR COURT

A Deer Canyon water, we call it; there is a little water comes out of this lower tunnel, and they get the surface water of the creek whenever there is any there; and these tunnels and places where they collect the water is more kind of springs on the side of the canyon/

Q Is there a surface stream in Deer Canyon the year around?

A I don't think there is, not after they draw their water; if they allowed that water to go into the bed of the creek there would be a little surface water in the creek, but they collect it all.

Q Have you ever seen water come out of Deer Canyon below the mouth of the canyon?

A Yes, sir.

Q How far below.

A Half a mile or such a mabber; I have seen it clear down to below the San Bernardino Road; that is only in a case of a heavy rain and shortly after a heavy rain; and ordinarily in the spring of the year when I have seen it flowing possibly one hundred inches out of the canyon, and possibly went down half a mile.

Q Was that just after a big storm?

A No, that was in the spring of the year.

Q But not immediately following a storm?

A No, sir.

By Mr. McKinley: Q Did you say when that was?

A I don't remember when it was; in the spring of the year some time; it was two years ago I think when I was last up there.

Q You say they took all of the waters of Deer Canyon?

A All that I saw, yes, sir.

Q You don't know of any other tunnels up there?

A There is one branch, -- Bloom Canyon, branches at the mouth of Deer Canyon and goes up; there is a little water there.

Q There is a tunnel there?

A I never was clear up there; I believe there is.

Q You don't know of a Bloom and Hines tunnel there?

A That is the one I am speaking of; I have heard of the tunnel; I never was up to the tunnel; when I was up there and saw that water, the water did not come into Deer Creek at all; it disappeared before it got to the mouth of what they call Bloom Canyon.

Q And you did not examine that tunnel, as I understand you?

A No, sir.

Mr. Britt: Q Have you ever measured the water out of either of those tunnels?

A No, sir; I made a rough measure out of the creek itsself below all of these tunnels.

Q At what time?

A That was that time I say I mentioned that I was up there in the spring of the year.

Q About two years ago.

A I think it was; and a rough measurement gave me about one hundred inches of water.

Q Do you know at what point, can you locate on the map exhibit P the point where you made that measurement?

A It is a point where the road leading to Deer Canyon is indicated on Defendants' Exhibit P --

Q What sort of a mark is it that indicates that road?

A A double parallel mark.

The Court: Q Near the figures 3000?

A Yes, sir. And at a point a little north of where that road crosses the line which idicates the southern boundary of the San Gabriel Forest Reserve.

Q The line which indicates the Southern California Forest Reserve --

A Is a dashed and dotted line

Q Extending east and west across the topographical map marked Exhibit P?

A Yes, sir,

Mr. Britt: Q It was inside the Forest Reserve, was it?

A Yes, sir.

Q North of the line you have last referred to?

A Yes, sir.

Q Where are the three tunnels situated with reference to the place of measurement?

A North of the place of measurement; one of them is considerably north of the place, and the hill that I just spoke of that the tunnel goes through, which the north end of the tunnel comes out of under the bed of the creek is shown in outline, by this double line, which I said was the road.

The Court: Q It is to the west of the road then?

A To the east of the road; the point of measurement is east of the road, and the tunnel is to the west of the road.

By Mr. Britt: Q Where are the other two tunnels you mentioned?

A One of them is a mile further north, and the other is

some short distance, a quarter of a mile possibly, still further up the creek.

The Court: Q You say north, but you are indicating northwest or nearer west.

A Instead of saying north, I should say up the creek.

Mr. Britt: Q Was the water of those three tunnels collected in any pipe or flume?

A There were certain flumes and pipe lines there; I don't know what kind of a pipe line it was; it might have been cement, or it might have been iron, for all I know; I think it was an iron pipe line.

Q Is it all controlled by the same party, do you know? Was the water from all three tunnels controlled by the same person or association of persons?

A Yes, sir.

Q Who?

A The Hermosa Water Company.

Q And carried down into the valley by what means?

A By means of a pipe line, probably iron and probably cement.

Q And distributed, some of it, or all of it, and used in this section 35?

A Yes, sir.

By the Court: Q Do you mean by the last answer to indicate that the Hermosa Water Company gets all of its water from Deer Canyon?

A All that it don't get out of its well.

Mr. Britt: Q You have no measurement of that flow?

A Only that one I mentioned. There was a measurement below

all of the tunnels; I have one measurement of the water in the box, I believe; I had forgotten about that; on April 1, 1908, there was 75.8 inches flowing over the weir.

Q Where?

A That is at the box, the north end of the colony lands, the distributing box in section 35.

Q You speak of those lands as the Hermosa Colony?

A Yes, sir.

Mr. McKinley: Q That 100 inches that you speak of, was that the creek?

A That was the creek flow.

Q But this last 75 inches was a measurement of the water being diverted by the Hermosa Company, was it?

A Yes, sir.

Q From the Deer Canyon?

A Yes, sir.

Q And that measurement was made at the distributing-box?

A Yes, sir.

Mr. Britt: Q Was it from those three tunnels? Was that amount you mentioned as 75 inches coming from the three tunnels?

A I believe it did; yes, sir.

Q Well do you know whether it did or not?

A No, I don't know exactly.

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ISAAC HOWERS.

Isaac Howers, a witness called by the defendants, being first duly sworn, testified as follows:

Direct Examination.

Mr. Conner: Q Where do you reside?

A Cucamonga, Hermosa Colony.

Q How long have you resided there?

A Thirteen years.

Q Have you resided any longer than that in the immediate neighborhood?

A No, sir.

Q Do you hold any position in the Hermosa Water Company?

A I have been zanjero.

Q Are you zanjero now?

A Yes, sir.

Q How long have you been zanjero?

A About six years, I think.

Q Did you have occasion to know anything about the waters of the Hermosa Water Company as received and put on the lands in the Hermosa Colony before you became zanjero?

A Yes, sir.

Q How long?

A About thirteen years.

Q For the whole thirteen years, you have known about that?

A Yes, sir.

Q Do you know what portion of the water of the Bear Canyon is taken and used by the Hermosa Water Company for irrigation on that land?

A All they can get.

Q The full flow of the canyon during the irrigation season?

A Yes, sir.

Q Now these tunnels that have been mentioned herq, tell us about those tunnels, where are they situated?

A Mr. Cousins described them pretty well; the first one is right in the mouth of the canyon as he described.

Q How much water flows from that one?

A Well, I should judge there is about 10 inches.

Q And how long have you known ~~of~~ have they flowed, and how long has it been used by the company?

A I think it is four years that that tunnel has been put there.

Q And the next tunnel up the canyon?

A That is about a mile further up.

Q How much water does that produce?

A Sometimes in the year it would produce a good deal, this time of the year.

Q Well, during the irrigating season?

A During the irrigating season it will produce about 17 inches part of the season, but in the latter part of the season it wouldn't run over 30, and years ago, in the dry seasons, it didn't reach that much; I have seen it when it didn't run 20.

Q The first tunnel that you spoke of, during the dry seasons some years ago, how much did that run?

A When that tunnel was dug, it only run five inches when it was put there.

Q How long has that tunnel been put there?

A I think that is 4 or 5 years ago that we put that there.

L. BENJAMIN
OFFICIAL REPORTER
SUPERIOR COURT

Q When was the second one put there?

A I think the second one was put there about 6 years ago.

Q Was it then constructed as it is now, or has there been any extension since?

Mr. Conner: Q Is there any tunnel further up the canyon?

A Yes, sir; one in Calamity Canyon, three quarters of a mile further up.

Q How much water does that produce?

A About an inch.

Q When was that constructed?

A Well, they were working there 12 years ago when I came there; I think they finished it that year.

Q And that you said would produce about an inch of water?

A About an inch.

Q Are there any other tunnels?

A No, sir; well we did have one about a mile and a half above that yet in Deer Canyon, but that was dug before I came there; it was open when I came there; it is closed up now; an earthquake threw a slide down over it and it has not been opened since; there was probably four inches of water there the first season I was there; I was with the zanjero, and there was probably four inches thrown out of that at that time.

Q And the water from the tunnels is all brought down to the canyon to the measuring or distributing box at the north side of the colony?

A Yes, sir.

Q Now, the other canyon there, called Alder Canyon, that is tributary to Deer Canyon, -- does that flow water in there?

A Well, that flows into the pipe that comes from Deer Canyon; that is lower down along the foothills.

Q About how much water comes from that source?

A Well, in some parts of the season there aint any; and some parts of the season there is about two inches; I would say there was two inches flowing there now, two inches.

Q Well, during the irrigating season how much?

A Take it on the average of the irrigating season, I wouldn't think it would average over an inch.

Q Have you made measurements of the water received at the distributing box through the pipe?

A No, sir.

Q You never made any measurements of that?

A No, sir; what measurements I made, was down to the distributing box.

Q That is what I asked you; the water received at the distributing-box -- that is what I aimed to ask you.

A Yes.

Q About how much water is received there, during the irrigating seasons from these different sources that you mentioned?

A Take it on an average through the season?

Q Yes.

A Take it on an average through an irrigating season, it would run about 55 inches.

Q How much is the most that has ever been received there when you made measurements of it?

A 90 inches, according to my measurement.

Q When was that?

A In the spring of the year.

Q Of what year?

A 1907.

Q What was the smallest quantity ever received down there that you measured?

A 28½ inches.

Q Then it varies between those two during different seasons?

A Yes.

Mr. Britt: Q What time in 1907 did you say March?

A In the spring of the year.

Mr. Conner: Q During this whole 13 years that you speak of, that you say you have had to do with the waters there, you saw all the water that came down the canyon to your receiving-box?

A Yes, sir.

Q About where does the pipe begin in the canyon to bring down this water? At the mouth?

A No, sir; the pipe commences clear at the upper end; I suppose it is two or three, close to four, miles up the canyon.

Q And it is piped all the way from that point down to the measuring box or distributing box?

A Yes, sir.

Q How is the water distributed from the box to the colony lands?

A Through pipe lines; a pipe runs to each man's corner.

The Court: Q Is the water from the well taken into the same pipe line as the water from the canyonx, before it is distributed?

A Yes, sir.

Q How do you distribute it? In heads?

A Yes, sir.

Q What heads? What is your system?

A Well, it runs by shares, 40 shares; 80 shares a day; if a man has 40 shares he gets 40 shares; 80 shares a day; we concluded to run 80 shares a day.

Q 80 shares covers the entire flow?

A Yes, sir.

Q If a man has 40 shares, he gets the entire flow for half a day?

A For 24 hours; we run 80 shares for 24 hours; it is divided so we run 80 shares each day; if I have 24, I get 24; another may have 30 or 26, and it is divided up; sometimes there would be four men running on some days. When there is two men running, each got 40 shares; that makes the 80 shares, and that is the way it is divided to run.

Q Do you supply the whole stream to one man for part of the day, or do you divide the stream?

A No sir, divide the stream; each one gets a 24 hours' run.

Q By Mr. Conner: Then the water id distributed in proportion to the number of shares of stock of the Hermosa Water Company that each distributee may own?

A Yes, sir.

Q Is it distributed to anybody but stockholders of the Hermosa Water Company?

A No, sir.

Q And that land must be within the prescribed limits of the Hermosa Colony?

A Yes, sir.

L. BENJAMIN
OFFICIAL REPORTER
SUPERIOR COURT

Q The domestic water, how is that distributed?

A That is taken out of the same pipe line, out of the irrigating pipe line.

Q Are there any separate pipes for that purpose in use?

A No, sir.

Q How is it taken from the pipes, from the main pipes?

A Through a small hydrant.

Q Then a hydrant is attached to the main distributing point?

A Yes, sir; each pipe is generally connected on to the larger pipe for domestic use.

Q Are there any stockholders that use the water from the canyon for any other purpose than irrigation?

A No, sir.

Q Do they all take water for irrigation, or are there some that simply use it for domestic purposes?

A Well, there is one or two I think that has only got 4 shares; they use it just for domestic purposes.

Q About when was this lowest measurement of the creek that you made?

A Well, that was before we put down the well.

Q Do you know about what year?

A It must have been about 1901 I think, or 1900, or somewhere along there; it was before that. I moved there in 1896, and I know it was very low in '96, '97 and '98. I think the lowest was the year we put down the well.

Q Was that sufficient for the purposes of the colony?

A No, sir.

Q You are familiar with the amount of water used there, and with the quantity actually required to get the most bene-

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OFFICIAL REPORTER
SUPERIOR COURT

fit from on the colony. that is, how much per acre is required?

A Well, that depends on the kind of soil a little; I think we ought to have an inch to six acres.

Q About that much throughout the colony, would that be sufficient, or is there such a difference in the soil within the boundaries of the colony that some would require any considerable more than others?

A Well, my opinion would be an inch to six acres would be enough.

Q Then was that 20 inches sufficient to furnish that to the different stockholders?

A No, sir.

Q Then about what quantity would be required to furnish that to the colony, that inch to six acres?

A I don't know as I can tell you just exactly.

Q Was that half enough, that 20 inches?

A No.

Q Then in your opinion an inch to six acres throughout the colony would be sufficient?

A That would be my opinion.

Q You said awhile ago you aimed to deliver two heads a day for irrigating?

A Yes, sir.

Q How often is that?

A Each man gets it every 14 days.

Q ~~Xmxxxxx~~ When was the well dug of the Hermosa Water Company?

A I don't know as I could tell you without looking on the records.

Q Well, the year, if you could tell what year.

A It must have been about 1900 or 1901; I don't know which.

Q You were then zanjero of the company?

A I think not that year; I don't think I was; I think Mr. Hall was zanjero.

Q Do you know how deep the well is?

A Well, I did know at one time; I don't know whether I could tell just exactly.

Q Have you made any measurements of the water flowing from the well or pumped from it?

A Rough measurements when we pumped, at that time.

Q Do you know what years they pumped?

A I guess I do. I could tell you if I had my book with me. I think the records here some place will show it.

Q You haven't the book here?

A No, sir.

Q Do you know who was secretary of the company at the time that well was dug?

A Yes, sir.

Q Who was it?

A Henry Albert.

Q Do you know whether there are any records of the amount of water pumped from that well?

A No, sir, I don't know as there was any record made of it; we measure what comes from the mountain, and measure what comes from the well.

Q Then uyou didn't make measurements of the well yourself?

A I have several times, yes; but not the water from the well alone.

Q You didn't make any measurements of the water flowing

from the well alone?

A No, sir.

Q You are familiar with the quantities of water? I mean you can make an estimate closely of what is flowing in a stream for irrigation purposes?

A At what time?

Q What I mean is, are you familiar enough with flowing streams to give an estimate of what may be in the stream; a stream large enough for irrigation purposes?

A I could guess at it; I don't know how near I would come to it.

Q Wel, do you know how much the quantity of water was that was flowing from the well at different times when you saw it, about how much water would be flowing from the well?

A When they were pumping?

Q Yes.

A About 20 inches.

Q All of the water from that well has to be pumped?

A Yes, sir.

Q Were you acting in any capacity for the company when that well was sunk?

A I think I was one of the board at that time.

Q Board of directors?

A Yes, sir.

Q But you don't remember when they began pumping the well?

A I couldn't tell you exactly the year.

Q During the time the well was being pumped or after, have you known of any person making any objection to the pumping of the well and using water from it?

A No sir, I never heard of any.

Q When the water was pumped from the well, it went into the same distributing pipes as water from the creek.

A Yes, sir.

Q And was distributed from there with the water from the creek?

A Yes, sir.

By the Court: Q How long have you been pumping from the well?

A I think we pumped three years from the well.

Cross-Examination.

By Mr. Britt: Q Was the well pumped as soon as it was dug or bored?

A No, sir, it was not pumped till the next year; it laid over a year after it was bored till the next year before we put our pumping plant on.

Q And you say it has been pumped for about three years?

A I think we pumped it three years.

Q That would be the seasons of 1906, 1907 and 1908?

A No; I think it was 1902, 1903 and 1905. I think the records will show that.

Q Then the well was not pumped after 1905?

A We have the records here that will show. Somebody knows more about it than I do.

Mr. Conner: I will put on a witness that knows that.

Mr. Britt: Q You have records that will show those things with accuracy?

A I think so, yes, ~~and~~ sir.

Q You came to that locality, to that neighborhood, in 1896?

A Yes, sir.

Q Have you been an orchardist there, cultivating an orchard ever since?

A Yes, sir.

Q Have you an old orchard or a young one?

A I have planted since I have been there.

Q And you found an inch to six acres sufficient for your purposes?

A Yes, sir.

Q Do you find it so at the present time?

A Yes, sir.

Q Do you observe that an inch to six acres is sufficient for the older orchards in the vicinity.

A I don't know as I could answer that question because I haven't paid any attention to it; I look after my own.

Q Is your orchard in full bearing?

A Not all of it.

Q Is a part of it in full bearing?

A Yes, sir

Q How much?

A About ten acres.

Q How much water do you give your orchard?

A Well, I give it my regular run whenever it comes.

Q Have you ever reduced that to inches?

A No, I don't know as I have.

Q At the time that you became a resident there, did you have any source of supply other than that which came down fr from Deer Creek?

A No, sir.

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Q That was all?

A Yes, sir.

Q Was the same pipe line in commission and in use to bring the water down from the creek that is now employed for that purpose?

A Yes, sir.

Q That was in 1896?

A Yes, sir.

Q What is the size of the pipe line?

A Six inch.

Q It never has been increased since that time?

A Not all the way down; we are enlarging it now at the present time; every year we put in a certain number of feet at the upper end.

Q You are enlarging it to what diameter?

A Eight inch.

Q I suppose you do not carry through the pipe line any more water do you, by reason of that enlargement. The lower part of it is six inch.

A Yes, it will carry some more water, if you have an eight inch start.

The Court: Q Your pipe line has been sufficient to carry all the water you had, has it not, at all times?

A No, sir.

Q It has not been sufficient?

A No, sir; not in certain seasons; not in the spring of the year; the latter part of the season it is.

Mr. Britt:: Q Can you get any more water through a pipe

~~time~~

line where the lower reach of it is six inches merely becaus you enlarge it to eight inches near the top or head of it?

A I think so, yes. We put in 2,000 feet. We have more pressure on it than six, in my opinion. I don't know. I never measured it to see. We are just supposing that now.

Q What is the length of the pipe line?

A The six inch pipe line I suppose is between four and five miles.

Q How long is the eight inch part of it?

A About 3,000 feet.

Q A little more than half a mile. Where does the pipe line begin, relative to that lowest tunnel? There are three tunnels used by your company, and your pipe line begins where? At the tunnel furthest up the creek.

A The six inch commences at the second tunnel.

Q And above that you have the eight inch?

A No, sir.

Q Where is the eight inch?

A Above that is four inch.

Q Where is the eight inch part of the pipe line?

A The eight inch pipe line is below the first sand-box in the tunnel; you might call it the first sandbox in the canyon; there are three sand-boxes.

Q Then the highest part of the pipe line is four inches in diameter, and an intermediate part of eight inch, and the lower part is six inch; is that it?

A The lowest part is six inch now. But from the first sand box where water is taken in, where all the water passed through the first sand-box, from that sand-box below is eight

inch about 3,000 feet. The rest is all six inch.

Q. Have you drawn any water from that earliest tunnel, the one up the canyon somewhere, I believe that you said was obliterated by a slide, have you drawn any water from that since you moved into that neighborhood?

A. Yes, sir.

Q. When did it cease to furnish any water, what year?

A. It furnishes some now.

Q. Is it received into a pipe line.

A. Yes, sir.

Q. About how much.

A. I never measured it; it is a two-inch pipe line where it takes it in.

Q. That is the highest up of any of your sources of supply, is it?

A. Yes, sir.

Q. The lowest tunnel was built four years ago, if I understood you right?

A. I think it was four years since the last work was done in it.

Q. And you got five inches of water?

A. Yes, sir.

Q. And the water increased some afterwards?

A. Some little, yes, sir.

Q. Has any one kept a record of measurements of the discharge from those three tunnels, any one in the employ of your company?

A. Not as I know of.

Q. You say that lower tunnel increased some little?

A Yes, sir.

Q It flowed five inches when first constructed, at what time of the year? In the summertime ? In the height of the dry season?

A I was just trying to think about that; I think they were about a year at it, about a year working at it; I couldn't tell you whether it was in the spring or fall or whether it was a dry season; the increase was not noticed till two years ago.

Q 1907?

A Yes, sir.

Q About how much increase was there then?

A About five inches.

Q Was that an estimate or a measurement?

A Well, it is an estimate; it is not a measurement;

Q The second tunnel I understood you to say was constructe eight years ago?

A I think so.

Q Your secretary has records to show the dates, the time?

A Yes, sir.

Q Do you know how much water it yielded at first?

A Well, it is only a guess; it never was measured.

Q Never had it measured at all?

A No, sir, I never measured it.

Q Did that increase any?

A It does in the spring of the year.

Q How is it along the dry season, August and September, the hot dry season?

A The last two years I just would judge by the flow of the

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water through the pipe that it would run about fifty inches.

Q The whole flow from all the tunnels has been as low as 25 inches you say?

A Well, there were no tunnels at that time.

Q No tunnel from anywhere?

A No, sir.

Q I thought you said there was a tunnel when you first went there in 1896?

A They were working at one, when I first went there.

Here the Court takes a recess until 2 o'clock p.m.

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AFTERNOON SESSION:-

Mr. Britt: Q Mr. Mower, did you observe the progress of sinking that well of the Hermosa Company?

A I was there off and on when they were sinking it.

Q Was it a dug shaft for some distance?

A It was dug 103 feet, I think, or about that.

Q And the total depth is how much?

A I think it ran about 225 feet or something like that.

Q It is drilled the balance of the way below the shaft?

A Yes, sir.

Q Do you know at what depth water was struck?

A Only by what the driller said.

Q Do you know whether the water raised in the well above the place where it was first struck in the process of sinking?

A It didn't, according to the driller.

Mr. McKinley: I move to strike that out as hearsay.

The Court: Stricken out.

Q Do you know anything about it personally?

A I know when the well was done the water stood up 10 feet from the bottom of the shaft, from where the casing was cut off in the bottom of the shaft.

Q At what depth was the water first struck?

A 10 feet, I always understood.

Mr. McKinley: I move to strike that out as hearsay.

The Court: Stricken out.

Q Do you know anything about it? Did you observe it?

A I didn't measure it.

The Court: Q Did you see the surface of the water yourself?

A I wasn't down in the shaft.

Q You could see it without going down in the shaft?

A Not very handy by looking down 100 feet in the shaft.

Q I thought you said it rose in the shaft?

A No, sir; I didn't say so. It didn't raise to my knowledge.

Mr. Britt: Q Did you see the water or observe the water or the level at which it stood when it was first struck in the process of digging or sinking?

A I saw it after the casing was cut off.

Q Did you see it before?

A I couldn't see the water before.

Q Who was the driller.?

A McCulloch, I think his name was.

Q M-c-C-u-l-l-o-c-h?

A I don't know how he spells it. He was a man from this town.

Q Does he live here now?

A I don't know.

Re-Direct Examination.

Mr. Conner: Q Tunnel no. 1 is situated at the mouth of Deer Canyon?

A Yes, sir.

Q When did you say they first began to use water from that tunnel? Or when did you first know of the use of water from the tunnel?

A 1901-- 1900 , I believe, they commenced digging it.

Q When was it completed?

A 1901.

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Q Since that time has there been any other work done on the tunnel?

A I think not. I think it was all done in 1900 and 1901

Q It has not been lengthened any since it was made?

A Not since 1901.

Q And ever since that time the Company has taken and used all the water that flowed out of that tunnel and the other tunnels, has it?

A Yes, sir.

Q Was Tunnel no. 1 the first or the last tunnel built?

A The last.

Q It was the last tunnel built ?

A Yes, sir.

Q They had been using water out of the other two tunnels before the completion of tunnel no. 1?

A Yes, sir.

Q They have used all the water flowing in the creek-- that of the tunnels and flowing on the surface of the ground -- during the irrigation seasons of this past thirteen years that you have known ~~it~~ about it?

A Yes, sir.

Q Would the pipes have carried any more water had there been any more in the canyon?

A During the irrigating seasons it would. That is, up to 1897, when we had the heavy rains; the water increased.

Q Was that in the winter time?

A In the winter time.

Mr. Haskell: Q You spoke of something that occurred in 1897: Do you mean 1897 or 1907?

A 1907.

Mr. Conner: Q Did the pipes carry all the water flowing then during that year in the creek during the irrigating season ?

A Yes, sir.

Q Then you didn't enlarge the pipes because they were not big enough to carry the water? You testified about increasing the size of the pipes.

A Yes, sir.

Q Was that because you would get more water for it?

A At certain times we wouldx take in more; in May and the fore part of June in 1907 the pipe didn't carry quite all of it.

Q Then there are afew instances in which there was some water running to waste?

A Yes; in 1907 in June-- after June and July I think it took all there was there, and would have taken more.

Q How old are your trees on your ranch?

A Mine is twelve years old.

Q All that age or some younger ones?

A Some younger.

Q How many of the older?

A I think I have about 800 trees that would go 12 years old.

Q How many younger?

A There is about 200; 200 or 225, or somewheres along there.

Q How old are they?

A Some a year old and some three years old. and some four.

Re-Cross Examination.

Mr. Haskell: Q How many acres of orchard have you?

A I have about 10 acres solid. It would make about 10 acres solid of orange trees.

Q How many acres of land under cultivation altogether.?

A 15.

Q How many shares of stock have you in this corporation?

A 60.

Mr. McKinley: Q Tunnel no. 1, constructed in 1900 and finished in 1901, is the one which was producing 70 inches at one time?

A No.

Q How much did it produce?

A When we dug it it produced about five inches.

Q What was the tunnel that youn referred to that produced 70 inches?

A That was tunnel no. 2.

Q Was that in before you went there?

A No, sir.

Q When was that put in?

A I think we commenced that in '96.

Q When was it finished?

A I think about '99; I can't tell exactly.

Q You spoke of extending the pipe line and also enlarging the pipe line, and I am not clear whether the pipe line was extended further up?

A No, sir.

Q Not been extended?

A No, sir.

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Q Simply enlarged by putting a larger pipe in?

A Yes, sir.

Q Do you know the Hines Tunnel in Deer Canyon?

A I have been up in his tunnel.

Q Whereabouts is that tunnel in the canyon? Above yours., or in another branch?

A It is up in another branch to the right hand. It goes up on the east side of Deer Creek. Canyon.

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CHARLES BROWN.

CHARLES Brown, a witness produced by Defendant Hermosa Water Company, being first duly sworn, testified as follows:

Direct Examination:

Mr. Conner: Q What is your name?

A Charles Brown.

Q Where do you reside?

A Cucamonga.

Q How long have you resided there?

A November '83, I believe, I came there; October or November.

Q What has been your business there?

A Raising oranges and lemons.

Q Do you own any land there.

A Yes, sir.

Q Are you familiar with all the lands of the Hermosa colony?

A Yes, sir.

Q Do you know what they are planted to?

A Practically. I could tell very close.

Q What are they planted to?

A Mostly citrus; almost entirely.

Q What particular kinds of citrus fruit?

A There is about 85 acres in lemons and the balance of the citrus is oranges.

Q How old are the oldest orchards that you know?

A I can approximate this very close. 100 acres from ~~10~~ ~~to~~ 20 to 25. 200 from 10 to 20; about 100 younger, making about 400 acres.

Mr. Britt: Q 400 acres in all in citrus fruit?

A Approximately; yes, sir.

Mr. Corner: Q You have irrigated your own orchard and observed the irrigation of others?

A Yes, sir.

Q Do you know about what amount of water it requires per acre for the older trees?

A I should say about an inch to five acres would be about right for old trees. It depends a little on the soil etc.

Q There is some difference in soil within the colony lands?

A Oh, yes; it is all made land, all over this country. It may vary in two feet.

Q Some of it in the colony requires more water than others, for a given age of trees?

A Yes, sir; a streak where it is more silty will require more water and dry out quicker than a streak where there is good sandy loamy soil.

The Court: Q You say this was all made land?

A I should say all that valley is made land.

Q How do you mean?

A Washed in from the mountains.

Q You don't mean it was made by the settlers themselves?

A No; it was made by somebody else.

Q A better workman?

A In some ways.

Mr. Corner: Q Do you know about the use of water of Deer Canyon? Does it require it all on the land in the colony?

A Yes, sir. You mean, of course, in the irrigating season. It wouldn't need it all in the winter time.

Q Do you know about the average flow of water from Deer

Canyon down to the colony?

A Well, at one time it got down to 28 inches, and we have had nearly 100; from 90 to 100 at one time.

Q Does it flow 90 all the time, or 28?

A I told you it ran all the way in the irrigating season-- the average would be-- it depends on whether there was lots of rain in winter; but it would average about 50 or 55. It varies a great deal.

The Court: Q Do you know the capacity of your pipe line?

A I think about 90 inches.

Mr. Conner: During the irrigating season they recive and use all the water flowing from the canyon?

A Yes, sir.

Q How is the water divided?

A The whole flow of the mountains is supposed to cover 20 acres or 80 shares each 24 hours. That is, it represents 24 hours and it repeats every 24 days. If it is divided among two men who have forty shares each, it would be each one would have half of the head; if it is divided among those who had 20 shares, there would be four running for 24 hours.

Q How do you divide it to the individual?

A There is different lines from the division box, and only one man situated on the same line at the same time, and the disision box gate divides the water, and we run pro rata.

Q Whatever there happens to be in the pipe line, the irrigator gets water according to the number of shares of stock of the company he owns?

A Yes, sir. He gets his pro rata of the whole.

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Q Are you familiar with the prices of land out in that general neighborhood?

A Fairly so; as good as anybody, I guess, may be.

Q What do you estimate to be the value of land per acre or, take it, the average value of land per acre in the Hermosa colony lands?

A Some of the land adjoining mine was sold for $1000 to the acre.

Q Would that be a fair average price for the land?

A Well, I think that would be a little over, because younger trees wouldn't pay quite as much as old orchards.

Q The largest portion is old orchards?

A As I said, about 100 acres it was about 20 to 25 years.

The Court: Q Was that the age of the trees on this property that you say was sold for $1000 an acre?

A About half of the old trees and half of the young trees.

Mr. Conner: Q Since you have lived there have you ever observed a cienega near the crossing of the Hellman Avenue and Base Line Avenue?

A I have been there a good many times.

Q When did that dry up and no more water appear on the surface?

A I don't believe I can tell you the exact date

Q About?

A You mean the Lone Star?

Q Yes.

A I didn't hve any interest in those water rights, and I might have gone over and seen it dried up and I wouldn't take a second thought. I can give approximately the time when

I think it is, but I wouldn't like to have it put on record as exactly the date.

Q Can you give an approximate date?

A It was in those dry years; about 1900, I should say. That is about the time it dried.

Cross Examination.

Mr. Britt; Q Are you an officer of the Hermosa Company, Mr. Brown?

A Not exactly; I am a director.

Q You say you have lived in the vicinity since '83?

A The fall of '83.

Q Was your company, the Hermosa Water Company, in existence then?

A Not as the Hermosa Water Company;practically the same as the Hermosa Land and Water Company at that time.

Q What is the date of your articles of incorporation?

A '87.

Q Was your company taking water from the creek in Deer Canyon as early as '87?

A Yes, sir; as soon as we organized we took the place of the old company.

Q There was an old company?

A Yes; the old Hermosa Water company.

Q Did that old company have a pipe line from the canyon down to the Hermosa colony?

A Yes, sir.

Q The same pipe line which is now in existence?

A Partially.

Q 6-inch pipe line?

A The cement pipe line has been wearing out and we have been renewing it

Q That was as early as '83?

A Yes, sir

Q Did you at that time or did your association take all of the water of the creek in the irrigating season?

A Yes, sir.

Q Are you accustomed to measure xxx water yourself?

A Not what you call expert.

Q Were you present when the water was measured flowing in that pipe line or out of the creek, by any person who was expert?

A I don't know as I could--

Q Were you ever present when the water was measuredx by an expert?

A No; not any that called themselves expert.

Q Did you have anything to do with the driving of those tunnels?

A Only to help pay for them.

Q Did you take any more active part than paying the expenses?

A I went up there and looked in a good many times. I was a director a good deal of the time, and I might have helped to get a contract with some party or something like that.

Q Do you know whether the records kept by the secretary of the company show when those tunnels were driven?

A I know it shows most of it, if not all of it.

Q Were you a director when the present Hermosa Water Company's well was sunk?

A No, sir.

Q Did you have anything to do with sinking the well more than paying the expenses?

A No, sir; I was over there some; I was over there occasionally.

Mr. McKinley: Q You speak of a time when there was only 26 inches: When was that?

A I think it was given to you this morning.

Q Your recollection is about the same as that?

A It is on the records.

Q What is the number of shares of the stock of that company?

A 1920.

Q Has it always been that since the organization of the company?

A The present company, yes, sir.

Q In '83 when you went there you say you were taking all the water from the Deer Canyon: You mean by that all of the surface flow?

A Yes, sir; except that little canyon called the Haines Canyon and the Plum Canyon. We never took that.

Q What you have been taking was the surface water?

A Surface spring waters; yes, sir.

Q Did you run a pipe line up as high as it is now?

A No, sir; not then.

Q How far short of that?

A It runs probably half a section higher; it runs about a quarter of a mile or half a mile higher; I guess half a mile.

Q A great many of the orchards in your estimate have been

planted since the time you went there?

A Oh, yes.

Q About how much was there in orchard when you went there?

A Not over 100 acres, or about that.

Mr. Britt: Was there any land at Ontario irrigated at that time?

Mr. McKinley: Objected to as not cross examination.

The Court: Sustained. Plaintiffs except.

Mr. Conner: Q While younwere a director of that company or at any time from the beginning of the sinking of that well did you ever hear any objection made to the digging of that well?

A No, sir; we never had any trouble till we ran against these phillistines here.

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HENRY ALBERT.

HENRY ALBERT, a witness produced by defendant Hermosa Water Company, being first duly sworn, testified as follows:

Direct Examination.

Mr. Conner: Q What is your name?

A Henry Albert.

Q Where do you reside?

A In Cucamonga. Hermosa Colony.

Q How long have you resided there?

A Thirteen years

Q What has been your business?

A Growing fruit.

Q What kind of fruit?

A I have grown oranges, lemons. olives, peaches, prunes and apricots also.

Q Do you now hold any position in the Hermosa Water Company?

A I am a director.

Q Were you there and had anythingto do with the digging of the Hermosa Company's well?

A I was secretary at the time.

Q Did you have anything to do about the well?

A No; no more than I would go over occasionally to see how the work was progressing.

Q When was that well dug?

A In 1900.

Q Finished in 1900?

A Yes, sir.

A We installed the plant in 1901 and pumped about two months in the fall.

Q Was any log of that well kept that you know of?

A I think I heard Mr. McCulloch mention the fact that he had kept a log, but there was no record of it taken.

Q Do you know where McCulloch is now?

A I do not.

Q How much did you pump that year?

A About two months. It was late when we got the pump installed.

Q Do you know how much it pumped?

A We measured the water two or three different times. That is,I was present when it was measured. At one timeit measured 32 inches as a maximum and another time 28.

Q What year was that?

A That year; 1901.

Q What is the capacity of the pump in that well if you know?

A At that time I should judge it was 28 inches. but it wouldn't be that to-day , because we crowded the machinery at that time more than it should have been crowded and we injured it.

Q When was it next pumped?

A It was next pumped in 1902, commencing about the middle of June and extending late into the fall.

Q Did you make any measurements that year or know of their being made?

A No, sir; not to my recollection. I only recollect two or three times that we measured the first year.

Q When was the well pumped next?

A In 1904. We didn't pump it in 1903 because it wasn't necessary; we have a good rainfall.

In 1904 we commenced about the middle of August and run into January. The rains didn't come early.

Q How far into January?

A Probably the middle or 10th.

Q Did the pump run continuously all the time?

A Not that last year; we had a great deal of trouble. I believe we aggregated a loss of thirty days in the breaking of the pumps and pulling of the rods and putting it together again.

Q Did you make any measurements that year or see any made?

A Of the amount of water pumped?

Q Yes.

A No, sir; it was only the first year.

Q Then the pump has not been pumped that year-- that is, after the middle of January?

A No, sir. The pump was a put in condition and started and they tested it, but it was notoperated for irrigating purposes.

Q Was the water measured at that time while you were pumping for testing purposes?

A Not that I know of personally. I have heard say that they had measured it.

Q How long was it in this test this last year you have been speaking of?

A Probably four or five hours; I am not certain as to that. I think I heard them say.

Q Did you ever make any measurement to determine how deep the water was in the well?

A I never did.

Q Do you know of there being made?

A I have heard of measurements being made.

Q When were they?

A I really can't tell which year they were made in. I have a recollection that the water was at about 45 or 50 feet from the surface of the ground in the casing. I must have got that through hearsay or measurement.

Mr. McKinley: I move to strike out the statement as hearsay.

The Court: Stricken out.

Q You don't know of any such measurement?

A No; I never assisted in making any and I never saw any made.

Q Is the water of Deer Canyon or this well delivered to anybody but stockholders of the Hermosa Water Company?

A No, sir.

Q And is it all used on the Hermosa Colony lands?

A Yes, sir; the lands are defined; it cannot be taken beyond that.

Q Do you know what property the company has, its pipe lines and division boxes and pumps and such matters?

A Yes; a couple of years ago there was a committee appointed to get that data under a former secretary. He was on the committee and they inventoried the property; and I filled an unexpired term of that secretary and I have a record. The report of the committee was copied ~~xx~~ into the records

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and my recollection is that it approximated about $33,000.

Q And that covered the pipe lines?

A Yes, sir; and our 1200 acres of land in the mountains, reservoir lot, 80 acres of water bearing land which we purchased from Mr. Hellman, and all the pipe lines and reservoirs and pumps.

The Court: What are the lands that you hold in the mountains?

A We have 1200 acres of ground which coveres our shed.

Q These tunnels are all on your land?

A Yes/

Q Have you that inventory that you made?

A It is on file, but I made a copy of it in the minutes and that is in charge of the secretary.

Q What did you state as the value of all that property?

A About $33,000, I think it was.

Q And you state that was made one or two years ago?

A Yes, sir. Two years ago next fall.

Q Has the property of the company deteriorated in value?

A No, sir; I wouldn't judge that it had. In fact, we have improved it since.

Q So it would be worth as much as it was at that time?

A Yes; every bit of it.

The Court: Q Speaking of that 1200 acres in the canyon: There is none of that agricultural land?

A No, sir; it is all rough.

Q How about the other?

A That is agricultural land. And our well is situated there.

Q Is it being cultivated?

A Yes, sir; it is used for hay purposes.

A Not a bit.

Q Would it grow trees?

A Yes; but it is not as well adapted to it as other soils in the vicinity, because it is a heavier clay vicinity.

Q All that land within the boundaries of the Hermosa Colony lands require irrigation in order to be productive for any sort of crop?

A Yes, sir.

Q And with irrigation it is profitable to cultivate the land?

A Yes, sir; proper irrigation.

Q What was the first ~~xxxx~~ cause of sinking that well?

A The dry years came on and we got down to 20 inches, and some of us had to resort to basting the trees or giving them just a little. We didn't pretend to raise fruit. We didn't have quarter enough water.

Q That well was pumped to furnish water when the flowing water of the canyon is too small to furnish water for the colonists?

A Yes, sir; that is the only time.

Q Since 1904 the water has been sufficient?

A Yes, sir; we had enormous rainfalls and haven't been under the necessity of operating the pumping plant.

Q You say the mountain stream has been sufficient since 1904?

A Yes, sir.

Mr. Conner: Q You have had considerable experience in handling water for irrigation and estimating quantities of water?

A Yes; on my own property.

Q What would you estimate the quantity of water to be pumped from that well when it was pumped, on an average?

A 28 inches, although I did see a measurement up to 32, but the pump varied.

Q That was strained conditions?

A That is right.

Q And more than the pump could stand?

A The engineer who helped us fix the plant last year advised us never to raise up beyond 25 inches, on account of the machinery being old.

Cross Examination.

Mr. Britt: Q Are you the secretary of the company?

A No, sir; not at present.

Q You have been a member of the company 13 years?

A Yes, sir; going on 14.

Q At the time you became a member of the company,-- that was, I take it, in the year 1896?

A Yes, sir.

Q I ask you if in 1896 you made any observation of the flow of water from the creek?

A I don't know as I did. I was a new comer-- a tenderfoot-- then, and I didn't.

Q Did you pay any attention to the driving of the tunnels by the company?

A I did to some extent, yes; I was secretary at the time and drew up the contrast and so on.

Q Is there anyone connected with the company now in attendance who knows more about the tunnels than you do?

A Of course, the records would tell that, and most of it

has passed from my memory; but the records will tell that. Of course, I can tell you approximately the length of those tunnels.

Q If the record shows it we won't go into it. Did you make any observation on the depth of the well and where the water was struck in drilling the well?

A Not personally, but it is of record--

Mr. McKinley: We object to what is in the record.

The Court: He can't testify to the records.

Q Do you know of your own knowledge?

A I had to have some knowledge to put it into the records.

Mr. McKinley: I have no objection to his using the record to refresh his memory.

Mr. Britt: If you have the record book here and the entries made by yourself, you can use it.

A Yes; and I know these were correct at that time. I got that from the paying of the bills. I wouldn't know ~~xxxx~~ where to find that in the minutes.

The Court: I understood you to say there were some data that you wrote down yourself?

A I did; but it is in the minutes and it would take some time to find it.

Mr. Britt: Perhaps the secretary can tell us. You will remain in attendance until the secretary is called. You mentioned that the well was pumped the first season about two months. That is, 1901, and there was an average of 28 inches?

A Yes, sir.

Q In 1902 you pumped it more extensively?

A About six months.

Q How did the quantity that you got on an average compare with what it was in 1961 ?

A About the same.

Q In 1903 there was no pumping?

A No, sir.

Q In 1904 do you know what time you began to pump.?

A Some time in August. I can't tell you the exact date.

Q And you pumped till some time in January?

A Yes; about the 10th.

Q After that there was no pumping?

A No, sir.

Q How about the quantity extracted in 1904 compared with the average production in 1901 and 1902?

A About 2 inches was the average right through. Although we had speeded up to a higher quantity that first year just to test it.

Q Did you know at any time the extent to which the level of the water in the well was lowered by the pumping?

A Only from hearsay; it is not of my own observation xt.

Q Do you know from any observations that you yourself made as to the depth of the well?

A No, sir.

Q Do you know how much digging you paid for,

A I can tell you the depth of the well and the boring--

Mr. McKinley: We object; the witness says he don't know.

Q What are your means of knowing it?

A By being secretary and the bills coming before the board and being acted on, by being paid for sox many feet dug or

bored. That was not my own personal knowledge; I didn't go down there and run a line of any kind.

Q Do you know how many feet of digging or boring your company paid for for that well?

A Yes.

Q State what amount you did pay for?

Mr. McKinley: Objected to as incompetent, immaterial and hearsay.

The Court: Objection sustained. Plaintiffs except .

A Mr. Rowe, the man that dug the well, is dead, and Mr. McCulloch I think bored the casing part. I don't know where he is. I don't know of anyone that ever took measurements.

Q What is the diameter of the well?

A I think they put down 12-inch casing.

Q All the way down?

A Yes, sir.

Q Do you know the~~xx~~ size of your pipe line and whether it is the same size all the way?

A From the mountain?

Q Yes.

A It originally was a six-inch cement line and the company decided, as the line is wearing out, we would replace it with an 8-inch steel riveted no. 16 pipe, and we are doing that to the extent of 1000 feet to the year, so that in time we will have it renewed and the expense won't come all at once. It was not to bring more water down, because the otherpipe carried it. That is, it will carry 90 inches.

Q The 6-inch pipe can carry all the wateryou ever had?

A Yes, sir.

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JOHN M. CAMPBELL

JOHN M. CAMPBELL, a witness produced by defendant Hermosa Water Company, being first duly sworn, testified as follows:

Direct Examination.

Mr. Cooper: Q What is your name?

A John M. Campbell.

Q Where do you reside?

A Hermosa Colony, Cucamonga.

Q How long have you been there?

A Three years the latter part of the coming September.

Q Do you hold any position with the Hermosa Company?

A I am secretary at the present time.

Q How long have you been secretary?

A I was secretary last year and this year.

Q Is that your minute book of the company?

A That was one of the previous minute books, before my time.

Q Do you know whether there are any records showing the work done on the tunnels and the well or anything in regard to it?

A I know there are records in there in regard to the tunnel work.

Q Will you turn to those records?

A I have one record in regard to the tunnel in Deer Canyon.

Q What is it.?

A In regard to a contract February 5, 1900. I should judge that was tunnel no. 1-- what we call the Petsch Tunnel.

Q Tunnel No. 1 is sometimes known as the Petsch Tunnel?

A As I understand it; near the entrance of the canyon. I haven't been up there, but that is what I know from what I heard some of the other stockhoders say.

Q You mean there is such a tunnel?

A As I say, it is at the entrance of the canyon. I have not been there myself, but from what information I got from the other directors that is where it is located.

Q Are there minutes entered in the book regarding that tunnel?

A Here is a minute I have here; I don't suppose it is when they started on the tunnel on January 7, '99; it is in regard to the contract-- there was 92-1/2 feet of the 100 foot contract with Silveria and Serpa completed.

Q What is the date of that?

A This is the minutes of the meeting where it was reported -- January 7, 1899; so I should judge by that that on that tunnel there was 92-1/2 feet completed at that time.

Q Read what it says about it.

A "Zanjero reported 92-1.2 feet of 100-foot contract with Silvery and Serpa as completed."

Q That was at a meeting of the board of directors?

A The regular monthly meeting of the board of directors January 7, 1899.

Q Do you know of any other records in that book which will show anything in regard to that tunnel?

A Here is a warrant drawn to Silveria and Serpa on account of tunnel contract, $130.

Q What is the date of that?

A That is at the same meeting; January 7, 1899

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Q Have you any further records?

A "Here is a report here at an adjourned meeting of the regular monthly meeting, January 13, 1899." The zanjero reported that Silveria and Serpa had completed the 100-foot contract and that 43 feet of the 100 was in rock and 57 feet timbered in gravel. Also, that the measurement of water was 8 inches flowing from the mouth of the tunnel.

Q Any further reference in the records?

A Hereis something in regard to checks and the paymentof the finishing work on that tunnel.

Q What is the dateof that?

A February 4th, 1899. Regular monthly meeting of the directors.

Q Of the Hermosa Water Company?

A Yes, sir; "Motion carried that a check or checks to the amount of $163 be drawn in favor of Silvera and Serpa as soon as funds become available to pay balance due on contract."

I suppose that would complete the work on that tunnel wouldn't it?

Q I don't know; if there is any more about it we want to know it.

A I notice here under March 4, 1899, "50 feet was reported to have been completed on the Silvera and Serpa 100 feet contract"; well, I don't know whether that is another contract; there must have been another contract for 100 feet entered into; I didn't notice in reading along there any notes of any contract being made.

Q Is that all the record that you know about affecting that tunnel?

A I wouldn't know unless I looked along in this book, being unfamiliar at that time with the work that was going on, when it was done, I wouldn't know unless I went through the record and picked it out.

Q Are there any records affecting any of the other tunnels, number 2 and 3?

A Not that I know of.

Q Well, what you have read is from the minutes of the board of directors of the Hermosa Water Company.

A Yes, that is all.

Mr McKinley, Q There is nothing else in the minutes about the tunnels?

A Nothing that I have noticed particularly; I will say in regard to that that previous to coming here, I thought we would be simply asked in regard to the pumping work, and I looked over simply the records, in regard to the pump, what work has been done with the pump, and I did not familiarize myself with any of the tunnel work as I did not imagine that had been brought up.

Mr Britt, Q Have you kept a record of the dates when pumping was carried on by your company?

A I have simply kept a record of what has been done since I was secretary; I was secretary last year and this year, that is all; previous to that I know nothing unless I should find it in some of the old records.

Mr Conner: The secretary that was secretary at that time knows about that.

A I wasn't secretary during the tunnel work or the installation of the pump.

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Henry Albert.

Henry Albert, previously sworn, being recalled by defendants, testified as follows:

Mr Conner Q. I understood you to say that you were secretary of the Hermosa Water Company at the time they dug the well?

A Yes, sir.

Q And for how long after that?

A I was secretary for five years beginning in 1900.

Q That was during all the time the well was pumped?

A Yes, sir; and the digging of those tunnels; I drew the contracts myself for both, the whole work on the tunnel.

Q Are there any entries in the minute book in regard to the water pumped from the well, and when and so forth?

A I don't believe we took any memorandum of that in the records.

Q Have you any measurements of any water in the records?

A Yes, sir.

Q Of the mountain stream, the gravity water.

Q Will you turn to those records.

A I can I think; here is one entry, July 5, 1900, for June, this was in the July monthly meeting, measurements for June: 1, 47; 5, 44; 10, 42; 15, 40; 20,38; 25,36; 30, 35 That is the month of June. That is the time we commenced seriously digging the well.

At the meeting of August 5, 1900, there was reported for July measurements:

1, 35; 5, 33; 10, 32; 15, 32; 20, 30; 25, 30; 30, 30; 31, 28. That was our minimum flow; it never got below that.

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A Here it was reported at the meeting of September 7, the same year, for August:

1st, 28; 5th, 29; 10th, 29; 15th, 29; 20th, 30; 25th, 28; 30th,29.

At the meeting of October 5th, the same year, the measurements were reported for the month of September:

1st,29; 5th,28; 10th,29; 15th,28; 20th,30; 25th,33; 30th,32.

I see the entrance of the well measurements now in red ink

Q Do you mean at this particular time?

A I mean I couldn't find it a while ago; I see here it now.

Now, the meeting of November 2nd, there was reported for the October measurements:

1st,32; 5th,33; 10th,32; 15th, 32; 20th,33; 25th,32; 30th,32

I will remark that was getting along in the Fall, and the water always raises a little even when it doesn't rain; there is a natural increase, because there is less evaporation. At the meeting of December 7th the same year, the November measurements were reported;

1st, ~~27½~~ 27½; my statement of 28 being the lowest was not quite correct; that is half an inch less.

1st, 27½; 5,32; 10th,32; 15th,32; 20th,32; 25th,32; 30th,32.

That variation might have come in by some loss in the Canyon; the zanjero measures at the box; there might have been something wrong, some break.

Mr Frith, Q This is November?

A That is the measurement for November, 1900.

Now, for December of the same year:

5th, 23; 10th,23; 15th,23; 20th,23; 25th,23; 30th,47.

That was evidently due to a break; that 23.

That concludes that year.

Q Where was that water measured?

A At the sand box, at the measuring box where we distribute it.

Q Did you measure it?

A No, sir; the zanjero measured it; this is the report of the zanjero to the Board at the meetings.

February 1, 1901, reported at that meeting for the month of January, 1901:
4th,36; 9th,34; 14th,34; 19th,32; 24th,44.

It seems there are no further reports as to measurements That was in the Spring months, when we didn't irrigate and there is no report.

At the meeting of July 5th, 1901; for the month of June, 1901, the measurements are as follows:
1st,52; 5th, 51; 10th,48; 15th,47; 20th,47; 25th,52; 30th,47.

Reported August 2nd, for July measurements:
1st,51;, 5th,48; 1oth,47; 15th,46; 20th,45; 25th,44; 3oth,43.

At the meeting of September 6th, 1901, reported for August, 1901:
1st,40; 5th,39; 10th,44; 15th,43; 20th,43; 25th,42; 30th,41.

Reported ~~October 1~~, November 1, for October, 1901:
1st,35; 5th;35; 10th,35; 15th,35; 20th,33; 25th,33; 30th,33.

Well, we get into the winter months now, and we don't have any more measurements.

At the meeting of June 6th, 1902, was reported the flow for May:
1st,48; 5th,47; 10th,43; 15th,40; 20th,38; 25th,36; 30th,35.
And there is an entrance there, June 13th, 1902, pumping

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plant started. Our flow was down to 32 inches from the mountains.

At the July meeting there was reported for the June measurements, as follows, June, 1902:
1st,35; 5th,34; 10th,34; 15th,35; 20th,34; 25th,34; 30th,34

Mr Haskell, Q Does that cover the pumped water?

A No, sir; it does not. Reported September 5th for August:
1st.30; 5th,29; 10th,29; 15th,29; 20th,29; 25th,28; 30th,28.

That is the minimum again; this goes into December and January, and we don't have any record. The following year was a good year and we didn't operate the pump; I might find some entrance here though; there don't seem to be any. Hold on; August 20th there was reported, fore part of August 72 inches; and August 20th, the particular date, 64 inches; that was in 1903, the year we didn't pump; and there is an entrance here August 31st also, 54 inches; water measurement for September, 1903, 46 inches. You can readily see why we were under the necessity of putting down a well to irrigate 600 acres; there is no entrance now; we had so much water from the mountains.

Q Well, get to where you pumped.

A We commenced to pump in 1904, the 20th of July, that is entered here; but there is no record of the amount of water flowing from the well.

Q Well, what was flowing from the creek? Was there any record of that?

A I was just trying to find if there are any. November 4th the zanjero reported 34 inches for the previous month; that would be October, 34; that was the year we pumped.

January 6th, 1905; I testified that they ran in January and this proves it; rains were deferred and we pumped in January.

Mr McKinley. Q That is a pumping measurement?

A No, sir; that is gravity water; 30 inches in January.

Mr Conner. Q None of the figures you gave are well water?

A None are well water.

Q All gravity water,- Canyon water?

A Yes, sir.

Q Do you know whether there is any entry in the minutes in regard to the tunnels, especially 2 and 3?

A No, sir; this was the aggregate of all the water from the various sources up there.

Q As to constructing the tunnels in the mountains, when they were completed?

A What years?

Q Are there any entries in the minutes?

A Why, there must be, because we dismissed the contractors and paid them off, and the minutes would show

Mr McKinley. Q Is that all the measurements?

A I think so; that was the end of my secretaryship and I see there are no entries further.

The Court: I understood you to say something about some entries in regard to the wells.

A Yes, sir; it is written in red ink by myself.

Q Well, what is it?

A Well number 1, open shaft, 102 feet.

Q What is the date?

A I wrote it right after the minutes of October 16th, 1900, it follows at the footing of that date. 118 feet of casing

below shaft; 12 feet drill below end casing, not cased; making 220 feet shaft and casing; 233 feet total drill and shaft; 233 feet from the surface to as far as the driller drilled; but only 221 of the shaft and casing.

Q Is there any entry about the depth of the water in the well?

A I don't remember of ever making any entrance as to the depth of the water; well we quit digging the shaft because we struck water, 103 feet; it was supposed to be just a surface stream; and the driller went through 10 feet of more clay formation, before he got into the gravel, and from that on he had gravel until he finished.

Q Those are all the measurements you have?

A Yes, sir.

Q You have read all you have?

A Yes, sir; all the measurements pertaining to the well; we would have to go back to the payment of these bills; the minutes show that, but I didn't see the measurements myself.

Q You didn't see any of these measurements made?

A No, sir.

Mr McKinley: We move to strike out the statement as to the well.

The Court: Stricken out.

Mr Britt: What does the motion cover.

Mr McKinley: The motion covers the statements as to what the driller found in the well.

Mr Conner : That is consented to.

Cross Examination.

Mr Britt, Q You mentioned that in 1904, July 20th,

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pumping began?

A Yes, sir; I did.

Q And pumping continued until what date?

A Well, to about the 10th of January.

Q Was that the year in which there was a good deal of trouble with the pump?

A Yes, sir; that was the year; the last year.

Q And there was an intermission of about 30 days?

A Yes, sir; about 30 days I reckoned up that we lost altogether.

Q I think you read an entry to the effect that pumping began in 1902, June 15th?

A Yes, sir.

Q When did pumping end that season?

A In the early Fall sometime; perhaps it might have been Novemberor December; I would have to follow up the record to find out; it was into the fall.

Q Could you tell by reference to these books when pumping ceased that year, 1902?

A I think so if I take time to hunt it up perhaps; I might look at the date. That is 1902?

Q Yes, pumping began June 15th that year. The question is when it ceased that year?

A I don't seem to be able to find any record of when we quit; that would certainly be in the Fall.

Mr Conner: Ifyou arenot familiar with those places in the record I will have Mr Campbell do that; he is familiar with them.

Mr Britt, Q See if you find any entry on October 11th,

or about October 11th, of that year, on that subject.

A here is reported here, October 3, reported here, the man hauled the oil the 3rd of October; his bill is here for hauling nine drums of oil; so we must have continued after that date; October 3rd meeting, motion was carried that the pumping be continued through another schedule; that means 24 days, the weather permitting; that meant if it rained we were not going to pump.

Mr McKinley, Q Weather requiring, I suppose that means?

A Yes, sir; that was October 3rd, that entry, so it would be till the 27th of October, would xxxx,itxxxt bring it, another schedule; it was discontinued no doubt about the first of November, according to that.

Q These reports and tables of the water received from the creek, along in 1900, and several years afterwards, included all the water received into your pipe line and brought by means of the pipe line from the creek and tunnels did it?

A Yes, sir; all from that source; no well water.

Q I notice in November, 1900, there was a measurement on the 20th of that month, of 22 inches?

A Yes, sir.

Q Wasn't thatbbecause that just at that time there was a heavy rain, and hence you did not take into your pipe line as much water - -

A Well, I think it was attributable,- it possibly might have been originally caused by a flood, or heavy rain disconnecting our pipes in the mountains; but there is such a discrepancy between the other measurements on either side,

it stands to reason there was something wrong in the mountain.

Q Was it the custom of your company to bring down the pipe full of water, whether it had rained and soaked the surfaceof the ground or not, whether you needed it to irrigate or not?

A Yes, sir; we brought it down usually even in the winter months; a good many of them used it on deciduous trees.

Q Was that the custom of your company from the beginning of your acquaintance with the pipe line?

A Yes, sir; especially during the dry years; we irrigated all winter; I have 30 acres of deciduous fruits, and I put the water in the winter months on those orchards; not on the oranges; that is why we continued; those normal seasons when we have had plenty we didn't irrigate anything . If the pipe broke we would let it run away until the irrigation comes or before it, and repair it; the only way I can account for the difference in these flows, is as I say there must have been a break.

Q Now, since 1900, your company completed, or drove, only one more tunnel?

A Yes, sir; number 1 was driven since that.

Q And that tunnel yielded very little water?

A Very little; yes, sir; until in 1907 it increased, in 1907; up to that time it was probably only three or four inches, or two or three probably; and it may be 15 inches now.

Mr McKinley, Q When were the other tunnels put in?

A They were put in previous to 1900; I couldn't tell you

the exact years; may be 1898; I know they were all put in since I resided there.

Q How long have you resided there?

A I have been there going on 14 years now.

Mr Britt, Q Have you any records or measurements of any measured water previous to 1900; the first that you gave was 1900?

A No, I don't believe I have; I don't believe the minutes show any; it got down so low those dry years , we had a curiosity to know how much was coming down, and we ordered our zanjero to make measurements; those are all official measurements.

Q Did the water get down lower in 1900, the water from the tunnels and the creek than you had ever known it before?

A Yes, sir.

Q Did it get down lower than the quantity furnished by the creek previous to the construction of the first tunnel?

A Yes.

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John McCampbell

John McCampbell, previously sworn, recalled for defendants, testified as follows:

Direct Examination.

Mr Conner, Q Can you tell the dates of the beginning of pumping each of the three years the wells were pumped, and the dates of closing?

A Pumping was in operation from August 29th, 1901, to November 27th, 1901. Was in operation during 1902; that is, started June 13th, 1902, and was run until about

October 11th, 1902. During the season of 1903 the pumping plant was not in operation. Started to pump July 20th, 1904, and discharged engineer January 6th, 1905.

Q That would mean you stopped pumping?

A Stopped pumping, I should judge; probably we gave the engineer, probably a week or so, after we did stop, to clean things up and close up things.

Q What is that you are reading from?

A I copied this from the records.

Q Can you turn to it readily in the records?

A I think likely I can.

Mr McKinley: There is no question raised about the competency of it.

Q Well, you need not do it then.

A I would say in regard to stopping the pump, that I came to those conclusions that we stopped the pump, that we paid the engineer off at different times, and I cameto the conclusion that the pump was not run after we paid the engineer and discharged him.

Q Ithas been your custom to retain the engineer a few days after pumping stopped to put things in shape?

A We paid him off a few days after pumping ceased; the starting of the pump I got that from the records and the employment of the engineer.

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Mr Conner: That is all the evidence I have to offer at this time on behalf of the Hermosa Water Company; probably Monday or Tuesday I will offer some chains of title.

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SAMUEL JOHNSON

Samuel Johnson, a witness called by defendants, being first duly sworn, testified as follows:

Direct Examination.

Mr Conner, Q Your name is Samuel Johnson?.

A Yes, sir.

Q Where do you reside?

A Cucamonga.

Q How long have you resided there?

A 22 years.

Q You live within the boundaries of the Hermosa Colony?

A Yes, sir.

Q Do you use any of the Hermosa Water Company's water for irrigation?

A Well, yes, partly, four shares of Hermosa Water Company; that is not much more than domestic water; probably used a little around the house on flowers and things.

Q Do you irrigate your land?

A With that water?

Q No, with any water?

A Yes, sir.

Q Where do you get it?

A From a well.

Q You have a well on your place?

A Yes, sir.

Q When did you sink that well?

A In 1903.

Q How much land have you got there?

A Forty acres.

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Q Is it planted?

A Part of it.

Q How much planted?

A 16 acres.

Q What is it planted to?

A Oranges.

Q What are the numbers of your lots and the block?

A 7 and 8, block 8.

Q Where is your well situated?

A On lot 8.

Q And how deep is the well?

A 514 feet.

Q Have you measured it?

A The well drillers measured it; I didn't measure it.

Q Who did?

A The well driller.

Q Did you see it measured?

A He toldme how much it was; he had it on record; I saw him measuring it.

Q You saw him measure it?

A He measured it with a cable.

Q Is there any log of that well?

A He had a log but I haven't got it now.

Q Did you try to get it?

A Yes.

Q What became of it?

A I couldn't get it; he didn't keep the record.

Q It had been lost or something like that?

A Yes, sir.

Q What capacity of pump do you have on the well?

A Pumps 35 inches.

Q Do you pump it at full capacity?

A Yes, sir.

Q During the irrigation season?

A Yes, sir.

Q Well, about how long do you pump it each season?

A About half the time.

Q How many months?

A Well, about 15 days out of each month; for about four or five months in the dry season, from the time the irrigation begins until it rains; whenever I need it.

Q Is your land, is the soil the same or practically so as the land throughout the Hermosa Colony?

A Part of it.

Q How old are your trees?

A Some of them are about I guess, 15 years I guess,- two acres 15 years; the balance 3 years.

Q Your land requires about the same amount of irrigation that it does in other parts of Hermosa Colony, the same amount of water?

A Yes, sir.

Q Do you pump water for any other place than your own,- your 40 acres?

A No, sir.

Q All you pump is used righton the land?

A Yes, sir.

Q The two lots are adjacent, that is lying right together?

A Yes, sir.

Q Have you any record at all of the water that you pumped there since you dug the well?

A Do you mean the inches?

Q Yes.

A No, I have not.

Q When you do pump you pump the full capacity of the pump?

A Yes, sir; full capacity.

Q Are you familiar with the prices of land in that section?

A Yes, sir; to some extent.

Q About what is your land worth per acre?

A About a thousand dollars.

Q About what is the value of your pumping plant and your pipe and so forth?

A Five thousand dollars.

Q How do you deliver the water from the pump to your orchard and the land generally?

A Through a pipe line.

Q From the beginning of your work toxput in the well clear up to this time, has there been any objection made to your putting in the well, and pumping water out of it, out there?

A No, sir.

Q When you pump during the irrigating season from what day of the month?

A It depends on the rain.

Q When did you begin your first pumping?

A Sometime in May I guess.

Q From that time May ,1905, up to now, you have pumped every irrigating season?

A Yes, sir; we started in July the first year; I didn't start before the 6th of July, 1905; that was the day I started up the pump; and I have pumped ever since, whenever I need it.

Q Could you get along without irrigation on that land?

A No, sir.

Q Well, with irrigation, it produces good crops, and keeps the trees alive and growing?

A Yes, sir.

Q Have you used on the land any more than was necessary for the purpose of irrigating?

A No, sir.

Q All that you did use was used beneficially?

A Yes, sir.

Cross Examination.

Mr Britt, Q You say that your pumping plant cost $5000?

A Yes, sir.

Q Was that the exact cost?

A Probably it varied a little bit; probably a little less; I don't know how much less.

Q What do you include in that?

A I include the pipe line, with the pumping plant, to put water on the ground where I want it.

Q What did your pumping machinery cost?

A $4500.

Q And the capacity of your pump is 35 inches?

A Yes, sir.

Q How did you obtain information about the capacity of the pump?

A Mr Fulton, - the manufacturing Company,- the man that put up the pump - put down the pump, rather,- he gave me the figures; told me it would pump 35 inches; probably 37½ - it depended on the slippets.

Q Do you know how high you lift the water from the well?

A It is 90 feet to water.

Q You lift it to the surface?

A Yes, sir; I lift it to thesurface.

Q Besides the $4500 for your pumping machinery, what was the other expense for? That made up the difference to five thousand dollars?

A Pipe line and building to put over the machinery.

The Court, Q Do you use a reservoir?

A No, sir.

Mr Britt, Q Did you pay any attention to the depth at which water was first struck in boring that well?

A Yes, sir; we got a little water at 65 feet; a little seepage, and 195 feet; 195 feet was practically the first water we got; about 190 or 195; a little seepage about 65 feet; we dug a shaft down about 60 feet first and there was a little seepage; and then I put on a well driller and went down and got the water at about 190 or 195 feet.

Q You drilled down from 64 feet?

A Yes, sir; from 65 feet.

Q The shaft was 65 feet deep?

A Yes, sir.

Q And the balance of thedistance was drilled?

A Yes, sir.

Q You say the total distance was 500 feet?

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A 514.

Q What is the diameter of the casing?

A 14 inch.

Q Where is the man who drilled the well for you?

A The man who took the contract lives in Pomona.

Q What is his name?

A R. F. Rice.

Q Did you have any well before you drilled this one?

A No, sir. Mr Rice took the contract, and Mr Manning and Rummel drilled the well.

Mr Haskell, Q How many acres of land do you irrigate?

A Forty acres.

Q Is it all planted to trees?

A No, sir; part alfalfa; 20 acres alfalfa.

Q The alfalfa requires more water than the trees?

A Yes, sir.

Q How much in proportion?

A About 12 inches to the acre.

Q That is the alfalfa -to the acre, do you mean?

A Yes, sir.

Q When you run this pump you run it night and day or only twelve hours?

A I run it mostly in the day time; sometimes 24 hours; mostly in the day time; whenever I feel like it; whenever I need it.

Q When you say you run it half the time, you mean you run it half the time, half the days, of 12 hours each?

A I probably run it mostly every day all through the season but not at night; that would be half the time, 12 hours out

of 24 hours.

Q You mean that you run it for 12 hours out of the 24 every day during theirrigating season?

A Yes, sir; practically mostly every day.

The Court, Q You don't mean you use 12 inches continuous flow on your alfalfa to the acre?

A Yes, 12 inches; it will take a head of water 30 inches, to irrigate one acre of alfalfa, for 12 hours, to irrigate it good

Mr Haskell, Q You say you have no reservoir.

A No, sir; no reservoir.

Q You just let the water run around on the alfalfa?

A Yes, sir; just pump it and let it run on the alfalfa.

Q Do you think that is an economical way of flooding it?

A I do; it is cheaper than to have a reservoir.

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Here the Court takes a recess until Monday, April 18, 1909, at 10:30 o'clock a.m.

-0-

J. W. McKINLEY.

IN THE

Superior Court

OF THE

County of San Bernardino

State of California

Cucamonga Vineyard Company, et al.,

Plaintiff S

vs.

San Antonio Water Company, et al.,

Defendant S

Vol. 55.

Monday, April 19, 1909

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I. BENJAMIN, Official Reporter

Monday April 19th, 1909. 56th Day.

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Mr Conner: I will introduce a little further time to introduce the paper title of the clients I represent; the abstract Company have not yet finished with it; they may be through some time today; this applies to both of my clients; and I also ask the privilege of introducing aother witness in regard to the location of the head of the Deer Canyon; I thought that witness would be here this morning but he has not shown up yet; I want to show that the head of the Canyon is as set out in the answer; that is not definitely fixed in the evidence; and if tomorrow I could take up about five minutes for that purpose, I would like that privilege.

Mr McKinley: We haven't any objection to that.

Mr Curtis: I understand at the beginning of the case, before the other defendants were brought in, that there was a stipulation made that all documentary evidence should be considered as read, and that all record evidence could be introduced by simply a referance to the record itself, and the description of the property; I thought that possibly that might not apply to the other defendants that were brought into the case since the stipulation was made; if so I would like to have the stipulation renewed so it would include us.

Mr McKinley: We are willing to that.

Mr Curtis: It is agreed then by all parties that that stipulation may be continued to apply to and include all parties.

The Court: My remembrance of the stipulation is that the

party making the offer, should identify the instrument by proper reference, reserving to the other parties the right to call for the record, or the original instruments at any time.

Mr Curtis: That is satisfactory to us.

(The above stipulation is assented to by all parties.)

Mr Britt: I suppose this will probably be a proper time and place to direct the attention of the Court, to the tabulations which are found at pages 88 to 97, inclusive of the reporter's transcript, relative to the elevation of water in all the 16th street wells of the San Antonio Water Company, also the three wells which are designated, as "S", "B" and "K" on Mr Trask's tabulations, the well S being otherwise designated as Hellman well number 2, at the head of the west branch of the Y tunnel; well B an artesian well further west somewhere, I believe on the slope of the Red Hill, and the well K, being a well further east, one of the Cucamonga Water Company's wells. Now, as to those last mentioned three wells, when the tabulation was placed in evidence early in the case, the understanding was as stated by the Court, that it be copied into the record, with the understanding that it is not in evidence; it is all tabulated together; better have them together in the record, to which counsel assented; and it would appear from statements made by counsel and the Court at that time, at pages 85, 86 and 87 of the record, that the three columns showing the tabulations of those three wells were not formally received in evidence; the matter was to be in abeyance, and anybody would have the right to offer them in evidence; and I desire that they be

considered now in evidence; they have been referred to right along here as if they were.

Mr McKinley: That is satisfactory to us.

The Court: They will be considered in evidence.

Mr McKinley: Yes, I supposed they were.

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ROBERT GRAY

Robert Gray, a witness produced by the defendant Cucamonga Water Company, being first duly sworn, testified as follows:

Direct Examination.

Mr Goodsell, Q You are one of the directors of the Cucamonga Water Company?

A I am.

Q How long have you been a director of that Company?

A Some ten or twelve years.

Q How long have you been familiar with the operations of the Cucamonga Water Company?

A Well, during all that time and for sometime previous.

Q During that time how has the water of the Cucamonga Water Company been distributed, that is as to physical means on the ground, whether by ditches or pipe lines?

A By pipe lines.

Q Has the entire distributing system been by pipe lines?

A Yes, sir.

Q What use has been made of the water?

A For irrigation mostly, for grapes, orchards, and crops of various kinds

Q any of it used for domestic use?

A Yes, sir.

Q What proportion of the water owned and controlled by the Cucamonga Water Company has been used?

A Why it has all been used.

Q Do you know of any of it having been wasted?

A No, sir.

Q State whether or not the quantity of water owned or controlled by the Cucamonga Water Company has been in excess of the requirements of such use?

A No, not since I have known anything of it it has not.

Q Referring to the water of the Kadie tunnel has any use been made of any portion of that xintx water during the winter time?

A To some extent, yes.

Q What use is made of the water during the winter?

A Well, it is used usually for domestic purposes, since the bulkhead was put in; ofcourse before the bulkhead was put in, a good deal of it was allowed to run to waste.

Q Since the bulkhead was put in, state if you know, whether any more water has been drawn out during the winter time than has been required for use, so far as the Cucamonga Water Company is concerned?

A Well, so far as the Cucamonga Water Company is concerned, it has not.

Q Reference has been made in the course of the trial here, to the renting of some water, or the leasing of some water by the Ontario Power Company to the Cucamonga Water Company. What is the fact, if you know, as to any water having been leased by the Cucamonga Water Company, from the Ontario

Power Company?

A The Cucamonga Water Company has never leased any water from the Ontario Power Company.

Q Also, reference has been made to the fact that the putting in of the bulkhead in the Sadie tunnel was delayed, through the non-concurrence of the Cucamonga Water Company: state if you know what the fact is with reference to that?

A Why, the Cucamonga Water Company put a bulkhead in on the east side, in what is known as a tunnel on the 20-acre tract in 1903, and it was such a success that we suggested, that is, the Cucamonga Water Company suggested to the San Antonio Water Company or the Ontario Power Company that we also put in a bulkhead on the Sadie tunnel, to conserve the water there in the same way; but the San Antonio Water Company told us that they did not have their upper end of the Sadie tunnel piped, it was still an open tunnel, it was timbered but it wasn't piped, and they were afraid if the water was backed up in there, when it was drawn off the following year, that their tunnel might cave in, and they were not prepared for it; and afterwards we never could get to an agreement,- we never could come to an agreement as to what portion of the water should be ours after it was stored.

Q And putting in a bulkhead was delayed by those reasons?

A Yes, sir. It was first suggested, however, by the Cucamonga Water Company.

Q Then if I understand you, and I put this perhaps somewhat in a leading way, so as to get to the conclusion briefly,

As I understand you the disposition on the part of the Cucamonga Water Company was to have the Eady Tunnel bulkheaded, and that any delay that occurred was not because of ~~h~~ the want of disposition on the part of the Cucamonga Water Company to bulkhead the tunnel, but to a failure to come to some agreement with reference to the details of the arrangement of it.

Mr. McKinley: Objected to as calling for a conclusion of the witness. He has stated the facts.

The Court: Sustained. I think it has already been answered.

Q What action if any was ever taken by the Cucamonga Water Company in the way of refusing to have the bulkhead put into the Eady tunnel. A We never refused.

Q You spoke of a bulkhead having been put in a tunnel in the 30-acre tract in 1903: What tunnel is that?

A Well, it is the tunnel that begins on the 30-acre tract and runs up into the Lone Star system on the eastern side of the Red Hill.

Q Is that the lower or upper tunnel of the Lone Star?

A That is the lower tunnel.

Q Do you know when that tunnel was constructed?

A Well, it was constructed before it came under the control of the Cucamonga Water Company -- that was commenced.

Q Do you know about when that was?

A Well, it would be about 1900, I should think.

Q Do you remember when that tunnel came under the control of the Cucamonga Water Company?

A Yes, it would be about 1902 or 1903; about 1902, I shoul think.

Q How long have you been acquainted with the locality of the Lone Star system and the tunnels connected with that system.

A Well, for about twenty years.

Q You knew the locality there then before there was any tunnel or any wells there?

A Well, that was what was known as the old tunnel or -- the upper tunnel was constructed there.

Q Did you know the locality before any development work was made?

A No, sir.

Cross Examination.

By Mr. Britt: Q Since the bulkheading of the Eady tunnel do you know accurately the amount of water or have you any means of knowing accurately the amount of water which has been received by your company, the Cucamonga Water Company, from time to time?

A Well no, I couldn't tell accurately.

Q Has a record been kept of the water received by the Cucamonga Water Company?

A Yes, our zanjero could give that information, I think.

Q What is your position in the company?

A Well, I am only a director at the present time.

Q Have reports been made showing the quantity of water received from the Eady Tunnel by your company?

A Yes, sir.

Q They have been kept on file, have they.

A Yes, sir.

By Mr. Britt: Is it the purpose of this defendant to produce these records, or the substance of them?

Mr. Goodcell: No, it was not my purpose. We have no objection to doing it. My understanding was that the evidence as to the water taken from the Eady Tunnel, both by the Cucamonga Water Company and the Ontario Companies have been very fully presented in the case.

Mr. Britt: What I had in view mainly is the ascertainment if we could of the times when the bulkhead was closed and when it was opened.

Mr. Goodcell: My understanding and idea is, that all the evidence that was in and at whatever stage of the trial it came in, is applicable to the Cucamonga Water Company, just the same as though it had been introduced by the Cucamonga Water Company itself.

Mr. Britt: That is true.

Mr. Goodcell: I don't want to take time to go over the whole thing, but simply ~~supplement~~ supplement the evidence already in with such additional evidence as I might have. If there is anything particular that is wanted, I will be glad to furnish it if I can.

Mr. Britt; I will discuss that with Mr. Gray or Mr. Goodcell out of court.

~~Mr. Goodcell:~~ Q. And your acquaintance with that tunnel extends over a period of 20 years.

A. Well, I couldn't say that far back.

Q. I understood you to say that before the bulkhead was constructed into the Eady tunnel, that in the wintertime your water mainly ran to waste.

A. Yes, sir.

Q. And what do you include in the term wintertime, what part

of the year?

A Well, the non-irrigation season.

Q Was that so of all the water that flowed from the tunnel?

A Well, usually so; during the rainy season when it was not needed for irrigation, an occasional head would be used, but most of it ran to waste.

Q During the non-irrigation period of the year.

A Yes, sir.

Q That was so of all the water which was discharged from the tunnel?

A Yes, sir, excepting what might be used for domestic purposes.

Q Well yes, I understood that, that your statement was that it mainly ran to waste.

A Yes, sir.

Q Where did it run? Down the wash on the west side of the Red Hill?

A Well, of late years it has run further west than that; it is carried a little further west of the pipe line of the Ontario Power Company, and then wasted down one of the small washes through that.

Q Do you mean carried over to the west, to what is known as the sand-box, the Stowell sand-box or measuring-box?

A Well, there is a sand-box there; I have never heard it given a name; and there is a sand-box a short distance --

is that in the neighborhood of the place where the water was turned out of the Ontario Water Company's pipe?

A I could see it coming from that pipe line; I didn't go up to the box to see if it came out of the box.

Q Now you say that was in late years; commencing about what time?

A Well, my particular attention probably was directed towards it along about 1898 or 1900, or in that neighborhood. It was after these large wells were struck up at the head of the Cady Tunnel.

Q These points of wasting from these pipes are a little way to the north of the San Bernardino road, are they?

A Yes, sir, just a short distance.

Q That is the road that runs to the south side of the Red Hill?

A Yes, sir.

Q Along by the winery?

A Yes, sir.

Q Is that road you mention a road which runs to San Bernardino and Upland or Ontario, or both towns?

A Yes, sir; well it runs to Upland and connects with another road running to Ontario.

Q I understood you to say that the Cucamonga Water Company never leased any water from the Ontario Power Company; did it lease any water from the San Antonio Water Company?

A No, sir.

Q In what year was that bulkhead put in the Lone Star tunnel? I understood that your company, the Cucamonga Water Company, got control of that tunnel in 1902 or 1903?

A Yes, sir.

Q And it was after that I suppose that the bulkhead was placed in the tunnel?

A The bulkhead was placed in that tunnel in 1903.

Q Did you personally have anything to do with opening or managing the placing of the bulkhead?

A No, sir, I was president of the company at that time, but we left that management to the zanjero.

Q At what depth below the surface of the ground is the Lone Star Tunnel at the place where this bulkhead was inserted or placed?

A Well, it would be in the neighborhood of 50 feet I judge

Q What time in 1903 was the bulkhead completed?

A Well, it was some time during the summer or fall.

Q What effect did the bulkhead have on the flow of water from that tunnel?

A Oh, it helped us ~~xxxx~~ very, materially the following summer, very materially.

Q The following summer?

A Yes, sir.

Q What I had in mind was the immediate effect, whether it operated to stop the flow of water from the tunnel.

A Oh yes, almost entirely.

Q Do you remember what time the bulkhead remained closed following its completion?

A It remained closed the following spring, when we opened it to irrigate, but I can't say what month it was opened.

Q When was it closed again, if at all?

A It was closed again the following fall.

Q The fall of 1904?

A Yes, sir; as soon as the irrigation season was over, we closed it again.

Q What has been the practice of your company with regard

to closing that bulkhead from that time on, since?

A As soon as the rainfall became sufficient to stop irrigation, we closed the bulkhead the first thing, and conserved the water as much as we could.

Q You personally have no record of the time during which the bulkhead was closed other than your general recollection?

A No, sir, I have not.

Q You couldn't give dates when it was closed and when it was opened?

A No, sir.

By Mr. Haskell: Q Do you personally know whether or not the San Antonio Water Company or the Ontario Power Company have allowed any water to run to wastex in the winter time from the Day Tunnel since the bulkhead was constructed?

Mr. McKinley: Objected to as not cross-examination.

The Court: The objection is overruled.

Mr. McKinley: Exception.

A No, I could not.

Mr. McKinley: Q You were a director of the Cucamonga Water Company during all the year 1902?

A I believe so; yes, sir.

Q Did you lease 65 inches from anybody that year.

A No, sir.

Q Didn't you lease 65 inches of water from the Day Tunnel that year?

A No, sir.

Q Didn't you pay the Ontario Power Company for water from the Day Tunnel that year, and don't your minutes show it?

A Well, there is a dispute about water; the San Antonio

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Water Company or the Ontario Power Company claimed that our zanjero took more than our share of water which we disputed, and have always disputed.

Q Well, that was the matter about which you had a lawsuit and settled?

A Well, they threatened us with a lawsuit.

Q Don't you know that that was entirely aside from that question, and don't you know that entirely separate from that your minutes show that you made large payments to the Ontario Power Company in 1902 for water?

Mr. Britt: We object to that as not the best evidence; the minutes are the best evidence.

Mr. McKinley: This is cross-examination. We are endeavoring to find out his knowledge of what the minutes show.

The Court: Sustained.

Mr. McKinley: Exception.

Q Don't you know the Cucamonga Water Company paid several thousand dollars to the Ontario Power Company in 1902?

A No, sir.

Q You have no recollection of anything about it?

A No, sir.

Mr. McKinley: Are the minutes here?

Mr. Cardwell: The minutes are here.

Mr. McKinley: We would like to have them, please.

Mr. Cardwell: I don't think you will find anything of that kind in there.

Q Do you know of any payments made by the Cucamonga Water Company to the Ontario Power Company?

A I know of a disputed claim that was settled.

Q Well, that was another matter -- there wasn't any payment on that.

A No, sir.

Q That was in 1904, wasn't it, the disputed claim you settled was in 1904?

A Well, I think it was in 1905 may be.

Q You are familiar with the minute-book of the Cucamonga Water Company.

A Well, more or less, I suppose.

Q Now, will you look at the minutes, what purports to be the minutes -- is this the minute-book of the Cucamonga Water Company?

A Well, it looks like the familiar handwriting of George Scott.

Q Will you look at the minutes of June 7th, 1902, and see the item, Ontario Power Company, leased water, April 1902, $77.77. Do you know what that was for? If you would rather you can take those minutes and examine them and refresh your recollection.

A I would say this was the time when W. H. Stowell was president of the company, and I wouldn't say; I have no recollection at all of any leased water, none whatever.

Q Were you a director at that time?

A Yes, sir, I was a director at that time.

Q Well, you may take the book and examine it. You are a director this year?

A Yes, sir.

Q What use is made of the water the present year? Has it been used for irrigating yet?

A Well, to some extent; mostly for domestic use.

Q When did you begin using water for irrigation this year?

A Well, the regular season has not begun; it is only spasmodic heads.

Q Do you know what is becoming now of the water taken out of the X Tunnel, whether that is being used or not?

A No, I couldn't say.

Mr. Holliday: That is all the questions I have, excepting this other matter; when Mr. Gray looks it over, I desire to recall him.

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H. J. KINCAID.

H. J. Kincaid, a witness produced by defendant Cucamonga Water Company, previously sworn, testified as follows:

Direct Examination.

By Mr. Goodcell: Q What position do you occupy at present, with reference to the Cucamonga Water Company?

A I am president.

Q How long have you been president of the company?

A This last season; last November I was elected president.

Q Were you a director of the company at any time prior to that?

A I have been a director of the company ever since November 13th, 1908, and prior to that I was a director of the water company one year in 1903 I think.

Q How long have you been familiar with the operations of the company in the way of the distribution and use of water?

A I think I am familiar with it since the starting of the Cucamonga Water Company.

Q Since when?

A Since the beginning of the Cucamonga Water Company.

Q During all that time what use has been made of the water that has been under the control of that company?

A We have used it for irrigation purposes and domestic purposes.

Q What proportion of it has been so used?

A Well, I think we have used it all during the irrigating seasons.

Q State if you know whether that use has been a necessary use?

A Yes, sir.

Q State if you know whether that use has been careful and economic?

A Yes, sir; especially in the last 12 years.

Q About what area of lands have been served with water by the company for irrigation if you know?

A I think we are irrigating now about 2600 acres.

Q What increase of acreage has been made if any in recent years, say in the last five or six years?

A There has been some increase; I don't think it is very much, though.

Q Can you state about how much?

A Well, no, I don't believe I could; it would be simply a guess.

The Court, Q Would your zanjero have better information on that?

A I think the zanjero has better information on it than I have.

Mr Goodcell, Q How does the quantity of land that is supplied for irrigation now, compare with the quantity ten or fifteen years ago?

A Well, we are irrigating about the same territory now.

Q What crops are raised on those lands?

A Well, we raise citrus fruits, deciduous fruits and grapes.

Q How long have the lands been planted to citrus fruits and other fruits?

A I think we have sold orchards around Cucamonga, probably thirty years old,- some of them a little older, probably, - but the majority of the trees were planted about 1884, 1885, or 1886,- somewhere along there.

Q State if you can in a general way what is the general rule of average, as to the lands irrigated by the Cucamonga Water Company, with regard to being old or recent planting?

A Well, I should say old.

The Court, Q Do you mean by that over ten years?

A Yes, sir.

Mr Goodcell, Q Can you state approximately about what would be the average age of the trees that are being irrigated?

A Well, I should say the average age would be fifteen years old at least.

Q What proportion of the acreage is planted to citrus fruits approximately?

A Oh, I should judge probably a quarter.

Q What is the other acreage planted to?

A Deciduous fruit and vines.

The Court, Q What proportion to vines?

A Oh, I should think in that section, what we are irrigating

is probably a couple of hundred acres, and probably less, probably less than 200 acres that we run any water on. That is just a guess; I have not tabulated the vineyards.

Mr Goodcell, Q What do you mean by saying itis just a guess?

A Well, I have not tabulated the number of acres, to say positively, that it is a definite number of acres.

The Court, Q You mean rather a rough estimate than a guess?

A Yes, sir; that is what I mean.

Mr Goodcell, Q And you are acquainted with all the lands that are served with water by the company are you?

A Yes, sir.

Q How about the water from the Eadie tunnel, as to the use of the water during the winter time, both before and since the bulkhead was placed?

A Well, we used that principally for domestic purposes.

Q How long has it been used for domestic purposes?

A Well, I imagine that it has been used for domestic purposes, ever since the Eadie tunnel was first built; we have a domestic supply from that source.

Q Before the bulkhead was put in was all the water that came from the Eadie tunnel, during the winter time, used?

A Well, I would think not; although we did not have a very large amount of water from that source before the bulkhead was put in for a while, and I imagine that during those years for a while, it probably was all used for domestic purposes.

Q Since the bulkhead has been put in place, do you know about what quantity of water has been drawn from the Eadie Tunnel, by the Cucamonga Water Company, during the winter

season,-that is, outside of the irrigating season?

A Well, I think that quantity has varied; this last season we have a stipulation with the Ontario people, as to just what is the maximum amount we can draw during the winter months; before this understanding was reached, I think we used just what was absolutely necessary, by both companies, I have an idea; that is the general impression that I have, and I think it is right.

Q Since that understanding has been arrived at, state whether or not you have been using more than was necessary?

A No; our instructions to our zanjero is, that we are not to draw any more from the Sadie tunnel than is necessary, and I don't think that we have; ofcourse that is a matter for the zanjero; we give him instructions to absolutely draw no more water, from any of our tunnels than is absolutely necessary, during the irrigating season; and ofcourse he reports it to me, just what he is doing; that is his instructions to conserve the water in both tunnels.

Q State whether or not those instructions have been followed so far as you know?

A They have so far as I know.

Q Has the company record of the quantity of water that has been drawn from the Sadie tunnel?

A I don't believe it has been the rule of the Cucamonga Water Company to keep any record.

Q When you speak of the zanjero reporting the amount he has drawn, was that reported in writing?

A No; he usually meets with the directors and reports the amount of water he has got, and what he has done, and I don't

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believe he has kept any records; and I think we have been lax in that respect; we may have a few; since I was elected president, in fact on our first board meeting, we told him to make a report on it; we want to keep the records a little better hereafter; but we have been lax in that respect; we may have some but very few.

Q Who would have such records, if you have any? The zanjero himself?

A The zanjero, probably, if he keeps a record of it; if there are any, he has got them; and we may have a few in our books but very few.

Q How long have you known the locality of the Lone Star wells and tunnels?

A Well, I have known that section since the early seventies.

Q Were there at that time any wells or tunnels or other water developments there?

A No, sir.

Q What was the condition of that locality at that time, as to have any naturally rising or flowing water on it?

A You have reference now to the Lone Star?

Q Yes, sir.

A There was a little spring in the Lone Star system at that time.

Q Where was that spring located, with reference to what is now the upper Lone Star well, at the head of the upper Lone Star tunnel?

A The first tunnel, or tunnel number 1, as it has been known in this case, on the Eadie or Lone Star system, was started in that spring; that is, they started the tunnel at the level

of that spring and tunneled into it.

Q Can you state about how much water flowed naturally from that spring?

A A very small amount.

Q One inch, or five or ten inches?

A Well, that was hard to tell; before any development was made, it was simply a place where the sheep watered at times; it would be hard - there was no way of measuring it; it was simply a mass of saturated ground, and a pool of water there.

Q What was the condition there as to being swampy or a cienega?

A There was very little swamp on the Lone Star system; it covered a very small space; more of a ravine nature; it was a very small spot there.

Q State when that first tunnel, tunnel number 1 was constructed, if you know?

A As I said before, it started just immediately north of Base Line, in the spring, what I would call the mouth of the Spring, or the lower edge of where the water came out, and continued in rather a northwesterly direction or course.

Q When was that tunnel constructed if you know?

A I think that tunnel was constructed along about 1888, 1889, or 1890,- somewheres along there.

Q Do you know by whom the construction was done?

A It was done by the Cucamonga Fruit Land Company.

Q About what was the length of the tunnel constructed at that time?

A Well, it would be a guess; I should judge 1000 feet or more.

~~Q What was~~

Q What was the result if you know, as to the flow of water from the tunnel?

A Well, the flow increased to quite a stream of water.

Q What was the next development made in that locality?

A The tunnel number 2, on the 35 acre tract.

Q When was that tunnel run?

A I think that was done in about 1900.

Q By whom if you know?

A That was done by- well, we know it by Stowell; I think it was a company that had it; I don't know as I could call the company's name, but Stowell was really the head of it.

Q It was constructed under his control?

A Yes, sir.

Q And state if you know, where that tunnel ran, with reference to tunnel number 1?

A Stowell bought that 35 acre tract, or his company, and he started this tunnel at the Old Settlers' sandbox, and ran it in a northwesterly direction, and practically in the line of the tunnel number 1, which was owned then by the Cucamonga Water Company; and it ran up - he ran it up to, or practically up to Base Line; that is as far as his 35-acre tract extended.

Q Where was the mouth of tunnel number 1, with reference to Base Line?

A Well, just north; and when we bought out the Stowell 35-acre tract in 1902, the Cucamonga Water Company, we continued the tunnel number 2, and connected it with tunnel number 1.

Mr Britt, Q In what year was that?

A We bought Stowell out - that 35-acre tract in 1902, and

we immediately continued that tunnel up to and under the tunnel number 1, and connected it with that tunnel.

Mr Goodcell, Q Do you know how far tunnel number 2 extended under tunnel number 1? That is, what distance?

A At this time?

Q At any time? Well, we are speaking now of what we you did in 1902: how far was it extended at that time?

A Well, it was extended up to Base Line; that is as far as he could extend it; that is as far as Mr Stowell could extend it at that time, up to Base Line.

Q I understood in 1902 the Cucamonga Water Company extended it still further?

A We bought the 35-acre tract in 1902, and then we extended the tunnel, up to,- I think it is called well number 5 on this exhibit.

Q I will call your attention to the line as designated on Plaintiffs' Exhibit number 1.

A Extended it to well number 5.

Q When was that extension completed?

A I think that extension was completed in 1905 I think.

Q And you say you made a connection between the two tunnels- how was that connection made?

A That was made by a shaft.

Q Where was that shaft located?

A Well numer 5.

Q Where was well number 5 located, with reference to the mouth of tunnel number 1?

A It was in a northwesterly direction,I should judge, a thousand feet from the mouth of tunnel number 1.

The Court: I am not sure I understand the relation of these two tunnels: number 1 is the one of greater altitude: that you call number 1?

A Yes, sir.

Q And the other one, the lower one, number 2?

A Yes, sir.

Q Is number 1 right over the line of number 2?

A A part of the way I think; I don't know just exactly whether they run together there; but anyway, they connect up there at well number 5.

Q Tunnel number 1 is now cut into tunnel number 2 at well 5?

A Yes, sir; there is a shaft - there was originally an artesian well, or a well, that extended up through tunnel number 1; that was that well number 5; and then we run tunnel number 2, up to well number 5, and cut the well at the lower elevation.

Q Number 1 does not extend north of well number 5?

A Yes, sir; number 1 extends up to well number 5.

Q How far north does tunnel number 2 extend?

A Just to number 5.

Q Number 1 extends further north than number 2?

A Yes, sir; up to number 6.

Q Is tunnel number 1 now drained through tunnel number 2?

A Yes, sir.

Q By their connection at well number 5, you drain the water out of tunnel number 2, all of it?

A All of it,- we can use it either way.

Q That is the way you do use it?

A That is the way we do use it.

J. BENJAMIN
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SUPERIOR COURT

Mr Goodcell, Q The water from tunnel number 2, the lower tunnel is measured at what well or measuring box?

A That is measured at weir number 5, is it?- - I have forgotten the number of that weir there. (After examining map.) It is weir number 7.

I want to explain in answer to the Court, we don't run all the water from the upper tunnel through the lower tunnel number 2; we don't take it all down into that tunnel; we have some land that has to be irrigated from that higher elevation; we have to raise it up to this level of tunnel number 1, in order to get it to our higher elevation.

The Court, Q So then as a matter of fact you irrigate from both tunnels?

A Yes, sir.

Q Is there any irrigation on the land where the tunnel is located?

A No, sir.

Mr Goodcell, Q The company itself does not use any water for irrigation?

A No, the Cucamonga Water Company don't use any water.

Q Now, you say the water measured at weir number 7 does not measure all the water that flows from both tunnels?

A Not necessarily.

Q What water does it not measure?

A It would not measure water from well number 6, unless it was turned down the shaft at well number 5.

Q Well number 6 is the well at the head of the Lone Star tunnel?

A Yes, sir.

Q Well number 6 is the well at the head of the Lone Star tunnel?

A Yes, sir.

The Court, Q What system have you, by which you can turn water from the upper to the lower tunnel, or prevent it going down? I understand you have such a system?

A Yes, sir; we have such a system;. Well, tunnel number 1 extends from the mouth of it up to well number 6, which is at the head of the Lone Star tunnel; and ofcourse when we change the water, a man has to go down in the shaft at well number 5 and turn it so that it will continue down the old tunneland if he needs it down below, then he would turn it down the shaft; it is all piped; those tunnels are all piped. It is simply a matter of changing the gate so as to turn it down the well, or let it go straight ahead.

Q Did I understand you to say that tunnel number 1 went to well 6?

A Tunnel number 1 goes to well 6; but tunnel number 2 is the one that goes to well 5, the lower tunnel, the tunnel underneath.

Q At the point of connection between the two tunnels, about how much is tunnel number 2 in depth below the level of tunnel number 1?

A Well, I never measured it, but I am under the impression from the zanjero, I think he told me what it was; I think he said about 110, about 110 feet; I am not sure; it is quite a depth anyway.

Mr Goodcell, Q I understand you have some arrangement by which the water flowing in tunnel number 1, and reaching

that shaft which forms a connection with tunnel number 2, that you have some arrangement, by which that water, instead of going down the shaft into tunnel number 2, may be carried across, and continued on down to the original mouth of tunnel number 1?

A That is the idea; yes, sir.

The Court, Q Where is this bulkhead built in the tunnel?

A The bulkhead is built in tunnel number 2, the lower tunnel.

Q Have you also a bulkhead in tunnel number 1?

A No, sir; that is dry, practically; that is a dry tunnel.

Mr Goodcell, Q The water from tunnel number 1, that is not turned down into tunnel number 2, and passes on to the mouth of tunnel number 1, at what weir is that water measured?

A I think that is weir number 5. Yes, weir number 5.

Q That water is used for the irrigation of land at too high an altitude to be irrigated from weir 7?

A Yes, sir.

Q State what proportion of the time the water is taken to weir number 5, instead of being allowed to flow down to weir number 7?

A I think there is very little water from well number 6, that flows down into the lower system, because we have to pump it so high; I think there is very little taken from that source into the lower system.

Q What quantity of land is irrigated from weir number 5?

A Well, that is the most extremely northern or upper irrigation is our weir number 5; ofcourse we could irrigate practically all of our system from that particular weir.

Q Well, I understood you to say there was some land irrigated from that weir, too high to be irrigated from weir 7?

A Well, I should judge we have got a thousand acres that would have to be irrigated from weir number5.

The Court, Q Well, then, you have practically two carrying systems from the tunnels, one of which comes from the upper tunnel, above, and the other through the lower tunnel, below?

A Yes, sir; that would be the situation.

Mr Goodcell, Q I understood you to say when tunnel number 1 was constructed there was a considerable flow of water from it?

A Yes, sir.

Q I understood you to say that tunnel number 1 is now drained, or practically dry?

A Yes, it is dry.

Q When did that change of conditions occur?

A Well, the Cucamonga Fruit Land Company, about the time they built that tunnel number 1, they sank these two wells - well number 5 and well number 6, and when they did that it practically dried up the tunnel; that is my impression.

Mr Britt, Q What dried up the tunnels?

A The wells; that is the wells were cut off at the bottom of the tunnels, why then there was no water, as I understand it, came in from the tunnel,- very little.

Mr Goodcell, Q I don't understand that, Mr [illegible]: At the time the tunnel was constructed there was a gravity flow of water from the tunnel?

A Yes, sir.

The Court, Q About how much? Do you remember?

A Oh, it increased; that work was practically done at the same time; the wells and the tunnels were practically begun along about the same time; as you run tunnels into these old springs, you increase the supply very rapidly; that is it seems to dry off the land very rapidly, and probably those supplies don't seem to be very permanent, but they do increase very rapidly, and when those wells were put into it, why ofcourse that increased the supply a great deal more.

The Court, Q I understood you to say a moment ago that the wells decreased the supply?

A It did not decrease the supply; what we got in the tunnel; but we simply got it from the wells instead of the tunnels.

Q Just got it in a different way?

A Yes, sir.

Mr Britt, Q Did you get it by pumping?

A Well, I don't think for the first few years that we had to pump those wells; I am not sure of that but I don't think so; I think for a few years we didn't have to pump those wells.

Mr Goodcell, Q Which was the first well sunk on the Lone Star System?

A I think number 5.

Q Is that the well that you refer to as being now a connecting shaft between the two tunnels?

A Yes, sir.

Q When was that well sunk, with reference to the time of completion of tunnel number 1?

A I think about the same time; I think that work was done-

that is my remembrance now - it is a long while ago - since 1887, and the work was quite extensive there at that time, and I wouldn't just say; and I know that the work was all done along in those years.

Q Is that a bored well?

A Yes, sir; a bored well.

Q When that well was first bored, did it open into the tunnel or did it stand up to the surface of the ground?

A It was cut into the tunnel.

The Court, Q You are now speaking of number 6?

A Number 6, that is the first well.

Q Is number 6 connected with one of the tunnels now?

A Yes, sir; number 6 is connected with the first tunnel, number 1.

Mr Goodsell, Q When that well number 6 was bored, what effect did that have as to increasing the flow of water from the tunnel?

A Oh, we got more water; that was my understanding of it that we got more water.

Q Do you know how that supply of water kept up?

A No, I did not keep track of those water measurements; in fact I know in a general way; that is about all I would know about that.

Q What was the next well that was bored in that system?

A That would be well number 5 at the end of the [illegible] tunnel.

Q At what time was that bored?

A Well, I think they were bored along about the same - - within a year or two of each other, - probably the same year.

Q When that well was first bored, did itconnect with the tunnel?

A It connected with the tunnel; yes, sir.

Q What is your best recollection as to the year in which those wells were bored?

A My best recollection is they were bored about 1889 or 1890.

Q When well number 6 was bored, did the water from that well flow into the tunnel, water rise in the well, so as to flow into the tunnel?

A From well number 6?

Q Yes?

A There was water - we struck water at the floor of the tunnel in that well, when it was cut off.

Q How long did there continue to be a gravity flow of water from tunnel number 1?

A Well, I think until they began to pump it.

Q When was that?

A Well, I don't know the first year they began to pump.

Mr Haskell, Q Who do you mean by "they" began to pump?

A Well, the Cucamonga Water Company - all that work is practically done by the Cucamonga Fruit Land Company.

Mr Goodcell, Q What do you mean by that?

A Well, the Cucamonga Fruit Land Company done most of them developments.

Q Now, I understand you to say there was a gravity flow of water from this tunnel number 1, until they began to pump: Was pumping begun there then before the gravity flow ceased?

A Well, I think we started to pump, to increase the supply

of water from that source, and I don't remember what year we did commence to pump; I might refresh my memory by looking up some data; but I can't think just when we first commenced to pump.

Q Well, can you state about when?

A Oh, I tink in the early nineties; the early nineties.

Here the Court takes a recess until two o'clock p.m.

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Afternoon Session 2 p.m.

(Witness Kincaid temporarily withdrawn.)

C. H. KILBOURNE.

C. H. Kilbourne, a witness called by plaintiff Old Settlers Water Company, in rebuttal, out of order, by consent, testified as follows:

Direct Examination.

Mr McKinley: We will consent that the witness be called at this time, out of order, but we are not waiving any objection that we may see fit to make, on the ground that the testimony offered may not be in rebuttal.

Mr Waters, Q State your name?

A C. H. Kilbourne.

Q Where do you reside?

A Cucamonga at present.

Q Do you know a certain well at Cucamonga called the Old Settlers well?

A Yes, sir.

Q Did you ever pump that well?

A Yes, sir.

Q When?

A I run the pump there in 1903 and 1904, the pumping season.

Q Did you keep any memorandum or record of the pumping operations?

A Well, I know about how long the pump ran; I have no memorandum now; I did at that time, though; I kept memorandum.

Q When did you begin pumping?

A I began pumping in June, 1903.

Q What time in June?

A Along about the 10th of the month; I think somewhere along there.

Q About the10th of the month?

A Yes, sir.

Q How long a time did you pump?

A Through the season until sometime in October.

Q Did you pump continuously from June to October?

A Yes, sir.

Q What time in Junedid you begin? About the 10th did you say

A About the 10th; yes, sir.

Q And you quit about what date?

A Sometime in October; I don't remember just what time the season closed.

Q Did you pump a fixed or a fluctuating quantity of water?

A Well, it was whatever the pump would throw; I don't think it fluctuated very much.

Q Well, about what did it throw?

A Well, about 30 inches I think.

Q That was 1904, you say?

A 1903.

Q Did you pump the well in 1904?

A Yes, sir.

Q What time of the year did you begin?

A Well, I began in June.

Q Do you remember what date in June?

A No, I do not.

Q Did you keep any written memorandum of it?

A I think I did; yes, sir.

Q What did you do with it?

A It is in thehands of the Old Settlers' Water Company.

Q How long did you pump in 1904?

A I don't remember but I think the season ended in October.

Q About what quantity of water did you pump during that season?

A About 30 inches.

Q In 1905 did you pump it?

A No, sir.

Q in 1906?

A No, sir.

Q Or ever afterwards?

A No, sir.

Q You pumped two years only, 1903 and 1904?

A Two seasons; yes, sir.

Q During those times did you turn in any report of the days pumped to the secretary, of the days, pumped, or any-. body else?

A I think I did in 1904.

Q During the time you pumped there for those two years, did you pump for a compensation, wages?

A Yes, sir.

Q Do you know of any book or record having been kept of that, by which we can determine the number of days pumped, or when you pumped?

A I don't recollect of any.

Q Did you pump for so much a day or so much a month or what?

A So much a month.

Q Your compensation was by the month?

A Yes, sir.

Q Irrespective of the number of days you pumped?

A Yes, sir.

Q So the books of the company, or vouchers, would show the number of months you pumped, but would not show the number of days, in any given month, would it?

A Yes, it should show the month but not number of days.

Q Does your memory serve you now, as to whether you pumped all the time, during each month that you did pump?

A No, there was part of the time that we were shut down for repairs, or something of that kind, that we were not pumping.

Q About how many days in the month did you lose for repairs? during the two seasons?

A Oh, I don't think it would average more than two or three.

Q This water that was pumped, for what purpose was it used and where?

Mr McKinley: Objected to as not in rebuttal; Mr D.A. Kilbourne testified in the plaintiffs' case in chief, as to the putting down of the well, and the location of it, and the pumping of it, in the year 1903 and subsequent years, and how and when they pumped, and how much they pumped. We submit that the plaintiffs went into this matter on their

case in chief, and it is not competent for them to introduce evidence in rebuttal on the subject; and so far as the use of it is concerned, that is not evidence in rebuttal.

Mr Waters: I want to prove the extent of the pumping, and the time when it was done, by the men that did it; as to the use of the water I suppose that has been well enough covered.

The Court: It seems to me that it is merely cumulative as long as it has not been contradicted.

I do not believe this is rebuttal evidence, and I do not see on what theory it is admissible on rebuttal; but if you make an application to put it in as part of your main case I will permit you to do so, ~~giving~~ giving the other side full opportunity to meet it if they so desire.

Mr Waters: The plaintiffs make such application.

The Court: The application will be granted.

Mr~~x~~ McKinley: Exception.

(Last question read.)

~~The Court:~~ Mr McKinley: That is objected to as having been already covered by uncontradicted evidence.

The Court: That is true of all of it; if counsel think there is anything new in it I want to hear it.

Mr McKinley: Exception.

A It was used for irrigating and domestic purposes.

Q And where?

A On the ranches, and by the ranchers of Cucamonga.

Q What ranches?

A Well, I think about 15 different ranches.

Q Well, generally speaking, the old settlers ranches or

some other ranches?

A The Old Settlers' Ranches.

Q At Cucamonga?

A Yes, sir.

Q Did you make any actual measurements of the water?

A I did not myself, but it was measured at times by members of the board of directors.

Q Did you see it measured?

A Yes, sir; I saw it measured.

Q You saw it measured did you?

A Yes, sir.

Q And do you remember such measurement?

A Yes, sir; I remember very nearly.

Q Well, what was was pumped?

A Well, we pumped about thirty inches, as near as could be got at it by the measurements.

Q Do you know anything about the quantity pumped in any other years, than the two in which you did the pumping?

A No, sir;I know nothing about it.

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CHARLES MINOR.

Charles Minor, a witness called by plaintiff, Old Settlers' Water Company, on reopening of case, being first duly sworn, testified as follows:

Direct Examination.

Mr Waters, Q Please state your name?

A Charles Minor.

Q Where do you live?

A Cucamonga.

Q How long have you lived there?

A It will be 11 years, the 15th of next month.

Q Did you ever run the Old Settlers pump at the Old Settlers well at Cucamonga?

A Yes, sir.

Q What year was it?

A 1905.

Q What time of the year did you begin running the pump?

A 7th day of June.

Q How long did you continue to run the pump?

A The schedule quit at the first of September, but it was pumped off and on a little while longer.

The Court, Q The schedule quit but the pump didn't?

A Well, they stopped pumping on the first day of September.

Mr Waters, Q How much water did you pump?

A About thirty inches.

Q Did you pump continuously night and day, or only in the day time?

A Night and day.

Q Did you pump every day during the period of time from the beginning to the end?

A Except when it broke down.

Q About how much of the time were you broke down?

A I pumped 3033 days in that length of time.

Q How is that.

A Hours, I mean.

Q 3033 hours?

A Yes, sir.

Q You pumped about 30 inches during the period which

you pumped?

A Yes, sir.

Q You never pumped there during any other year, or did you other than 1905?

A In 1904, the very last of the season I pumped I think about six weeks.

Q And that ended what time?

A About the same time; I couldn't say; I didn't keep no track of it.

Q Were you paid by the week, month or day?

A By the month.

Q And you pumped no other year than 1905?

A No, sir.

Q That is all you know about it?

A Yes, sir.

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C. E. FREEMAN

C. E. FREEMAN, a witness called by plaintiff Old Settlers Water Company, on opening of case, being previously sworn, testified as follows:

Direct Examination.

Mr Waters, Q Have you got anything that will indicate when the pump of the Old Settlers has been operated?

A In 1906, 1907, and 1908, I have the number of hours we pumped.

Q Did you keep that minute yourself?

A Yes, I helped run the pump.

Q Were you familiar with the fact?

A Yes, sir.

Q State what pumping was done in 1906, using any memoranda made by yourself at the time?

A In 1906 we pumped 3025 hours.

Q Beginning what date?

A About the first of June.

Q Ending about what time?

A The first of November.

Q What quantity of water?

A Thirty inches.

Q Would it average that right along, or was it that set quantity?

A That was the average; sometimes a little bite more and sometimes a little less; practically thirty inches.

Q Now, in 1907 how was it?

A In 1907 we pumped only extra water.

Q How many hours?

A 1541 hours; we pumped some in June, July and August; during five or six months; we got some water from the Springs and this was extra water.

Q What quantity did you pump?

A Thirty inches.

Q Whenever you pumped, you pumped that much?

A Yes, sir; we run the pump to get that number of inches.

Q Have you got the first and last pumping of that year?

A We pumped a little in each month.

Q When was the last month?

A The last month was November.

Q Now, take 1908, how many hours?

A 870 hours.

Q The same capacity?

A The same capacity.

Q Beginning what date?

A Part in June, and part in July, August, September, October, and November.

Q The same quantity?

A The same quantity.

Q All this water was used where and how?

A By the Old Settlers Company on their lands.

Q On their lands at Cucamonga?

A Yes; for irrigation purposes and domestic.

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Mr Waters: Plaintiff, Old Settlers Water Company, rests.

The Court: The defense will now have an opportunity to meet this new evidence.

Mr McKinley: We do not care to introduce any evidence on that subject.

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W. J. KINCAID.

W. J. Kincaid, previously sworn, being recalled by defendant, Cucamonga Water Company, testified as follows:

Direct Examination.

Mr Goodcell, Q Referring to the tunnels and wells which you mentioned in your testimony this forenoon, did you have anything to do personally, in the way of the supervision of their construction?

A No, sir.

Q And in giving the dates and times, do you have any memorandum by which you can fix those dates with any certainty?

A No, sir; simply guessed at it.

Q How is your memory as to those dates, as to being distinct or positive?

A Well, I couldn't be positive;.They are back nearly 25 years, and it is pretty hard to be positive about the dates.

Q Reference has been made to the water being turned into the Lone Star Tunnel, for the purpose of supplying or building up that water,- the water that has been referred to as the Hermosa water,- do you know anything about that water being brought over there, and turned into the tunnel?

A Yes, sir.

Q When was that done first?

A Our zanjero can give the exact date of that; he is here, and will probably be on the stand and can tell that exactly probably.

Q He will be able to be more definite about that than yourself?

A Yes, sir.

Cross Examination.

Mr Britt, Q Your recollection about the order of events a few years ago and the quantity of water, and the depths of tunnels and depths of wells, seems to be vague, respecting all of those particulars: Is that so?

A Yes, sir; I think it is.

Q I think I understood you to say something about irrigating a thousand acres of land, with water out of that tunnel number 1: Did you so express yourself?

A I approximated about that.

Q Do you mean there was water enough out of tunnel number 1 to irrigate a thousand acres of land?

A Well, we have another well, which is called Well K here, that we got some water out of.

Q Do you know what quantity of water you got out of well K, or is the recollection of the zanjero more definite , or rather, is the information of the zanjero more definite in regard to that?

A The zanjero can give that exactly; if I was to tell you it would simply be a guess.

Q Do you know what quantity of water you got out of tunnel number 1, or is that more fully in the knowledge of the zanjero?

A It is simply the knowledge from the zanjero.

Q You spoke of the irrigation of vines with water of the Cucamonga Water Company: I understood you to say about 200 acres?

A Yes, sir; something in that neighborhood.

Q Have you any accurate knowledge on that subject or is that a general estimate?

A Well, that is a general estimate; I have more in mind when I say two hundred acres; there was about 200 acres under our irrigating system,- people owns vines that has water stock and own vineyards, too; that is what I had reference to, under the irrigating system, and owned by parties who has stock.

Q For how many years have these vineyards or some of them been irrigated?

A Well, formerly we irrigated - the old settlers irrigated their vineyards every year. And ofcourse the last few years, or last twelve years, we have not irrigated the vineyards

very much, although some of them have irrigated continuously ever since; I have 12 acres of vineyard on my place, raisin grapes, and that I have irrigated , practically one irrigation most every year, except one or two years that I couldn't spare the water.

Q You thought the water was more valuable, in those one or two years, for other crops, for other kinds of growth?

A Yes, sir; I have an orange grove, and I had to put it on my oranges and deciduous trees and let the vineyard go.

Q What do you know about the relative productiveness of irrigated vineyards and those not irrigated? Which produces the most?

A Oh, an irrigated vineyard will yield the most.

Mr McKinley, Q Do you know how much of this 200 acres was irrigated in recent years?

A Why, I have not figured it out; it would simply be a guess.

Q About what proportion?

A Well, up in my immediate neighborhood, joining me there, there is about 56 acres irrigated.

Q What about the rest of the 200 acres?

A Well, that is down in the lower end of the Colony, and personally I know of 30 acres that is irrigated every year.

Q How much do you know of that is not?

A And then we get down to the Lucas Ranch Company; they have several hundred acres there,- or several acres; I don't know how much water they put on it.

Q Do you know whether they put any on it?

A I think they do; I was talking to one of them about it --

Q Well, we don't want any of that .

A You don't want any - -

Q When do they irrigate - what time of the year?

A Well, some of them irrigates regular - at a regular run of water.

Q You say you irrigate once: When do you irrigate?

A Well, I didn't mean to say that I irrigated only once, but whenever I could spare the water.

Q When you irrigate only once during the season what time do you irrigate?

A Well, ,we should irrigate along about the middle of August.

Q Do you irrigate at that time, when you irrigate once in the season?

A Well, that is when I would like to irrigate.

Mr McKinley: I move to strike out the answer as not responsive to the question.

The Court: The motion is granted.

Mr Britt: Exception.

A Well, I have irrigated in August.

Q When you have irrigated but once in the season, what time was that?

A Well, I remember particularly in August at one time that I irrigated.

Q That is the time the water is scarcest isn't it?

A Yes, sir.

Q Then it is not because you have plenty of water that you irrigate?

A Well, when I can spare the time, that is the time I

would like to irrigate.

Q Are there any of the 200 acres under the Cucamonga water Company system, that they don't irrigate, in vineyard?

A I think I approximated about two hundred acres of vineyard in the Cucamonga Water System.

Q Do you know of any of that 200 acres that is not irrigated?

A I think there has been some new vineyards planted out in the recent years, that has not been irrigated.

Q About how much/?

A Oh, I should think 150 acres.

Q What kind of grapes, raisin or wine?

A I don't know.

Q What is your vineyard?

A My vineyard is raisins -Sultana raisins.

Q These other places that you speak of are raisinx grapes, aren't they?

A Except in two instances, I know of wine grapes.

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ROBERT GRAY, recalled by defendant Cucamonga Water Co., testified as follows:

Direct Examination.

Mr. Goodcell: I have recalled this witness to give him an opportunity to make an explanation of part of his testimony.

Q In your testimony this forenoon you said that the Cucamonga Water Company had not leased any water from the Ontario Power Company.

A Yes, sir.

Q And after that your attention was called to certain entried in the minutes purporting to show the payment of certain sums to the Ontario Power Company for leased water.

A In looking up the minutes I find that they were referring to a time when [illegible] Stowell was president of the Cucamonga Water Company, and the Water Company was controlled by the Land Company and [illegible] Stowell and associates also owned the Ontario Power Company, and as regards the dealings amongst those companies, I didn't know anything about. I was on the board at that time, but at that time we didn't give it much attention because we had no control of it, and I hadn't thought anything of that kind.

Q Had the Cucamonga Water Company been leasing any water from Stowell?

A As I remember it, they probably did. I can remember that Mr. Stowell sunk a large well or what turned out to be a large well, at the head of the Lady Tunnel; and as I remember, we were short of water and he leased some water to us that year. But he had control of the Water Company and I can't re-

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member the details. But that was before the Water Company came into the hands of the Settlers.

Q Is there anything further that you would like to state about your testimony?

A No. When that item was called to my attention I had no thought of it. It had escaped my mind. In fact, I don't remember the circumstances. But when I got to looking up the minutes I saw that it was at the time Mr. Stowell was president and had control of it, and as I say, we didn't give it much attention in those days.

Cross Examination.

Mr. McKinley: Q

Q Then you withdraw your statement that the Ontario Power Company leased no water to the Cucamonga Water Company, and say you don't know whether it did or not?

A The Ontario Power Company as now constituted, I want to say that they didn't.

Q It was the same corporation?

A Yes; but it was controlled by Stowell.

Q And you don't know whether the Ontario Power Company leased to the Cucamonga Water Company or not?

A Only what I can remember indefinitely

Q Whatever you do recollect is to the effect that it was leased? You don't remember that there wasn't a lease?

A No. I do notx.

Mr. Britt: Q Have you any knowledge on the subject other than such as appears from the three or four entries in this book of minutes which Judge McKinley showed you this morning?

A I can't say that I have, only from a very dim recollection.

Mr. McKinley: We don't claim that his testimony shows that there was any lease, but he simply wants to modify his statement that there was not.

Mr. Britt: Q Judge McKinley called your attention to an entry at page 77: Will you read that entry, if you please, giving the date and so on, showing what it is, and the line referring to the Ontario Power Company?

A "North Ontario, Cal., June 7, 1902. Upon call of the president a special meeting of the board of directors of the Cucamonga Water Company was held in the office of the company this date soon after the adjournment of the stockholders' meeting. Directors present: M. [illegible] Stowell, [illegible] A. Van Fleet, H. H. Morgan and Robert Gray. Meeting called to order by the president and the following bills were read: Voucher no. 1001, Ontario Power Company, leased water, April, 1902, 277.77.

Q What other entries are there in that book on the same subject?

A Well, there is another entry--

Q State them all. I want them all.

Mr. McKinley: Objected to as irrelevantm, immaterial and incompetent, hearsay, not the best evidence and not cross-examination.

Mr. Britt: He says his information is derived from these pages.

Mr. McKinley: He says he hasn't got any.

Mr. Britt: He says his memory is indistinct on what he knew about it. His recollection is refreshed by these entries contained in this book, and I want to get them all.

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The Court. I think you have a right to those entries, but not in this way. This witness didn't make the entries. The objection is sustained.

Mr. Britt: It isn't our inning, but I will offer as part of the crossexamination of this witness an entry on the same subject appearing on page 67, June 30, 1902-- We offer the entry on the same page as the first to which the witness referred as follows:

"Ontario Power Company, leased water for May. 277.77."

Mr. McKinley: Objected to as irrelevant, immaterial and not cross examination.

The Court: Overruled. Defendants except.

Mr. McKinley: I would like to add that it is not best evidence.

The Court: I understand that it is offered as a record.

Mr. McKinley: Yes; but we don't understand that a record of the Cucamonga Water Company is proof of any substantive ~~evidence~~ fact.

The Court: I think the evidence is admissible. The Cucamonga Water Company is a defendant here and plaintiffs have a right to offer evidence against them. The only reason I sustained the other objection was because he used the record to refresh his memory.

Mr. McKinley: Exception.

Q What do those figures which I refer to mean: 277.77?

A It is evidently two hundred and seventy seven dollars and seventy -seven cents.

Q Do you know what it is?

A Yes, sir.

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Q Now page 87: On that page do youfind a similar entry?

A Yes, sir. "Ontario Power Company,**rent** of water for June"

Q How much?

A $277.77.

Q Is there any other?

A On page 92, Ontario Power Company-- here it does not say rent of water-- but it says "Ontario Power Company, $277.77."

Q Is there any other entry in these books relative to that same subject-- leased water from the Ontario Power Company?

A I haven't found any. I looked through it and haven't found them.

Q Those are all that you know anything about?

A That is all I know anything about .

Q Was there any otherpayment authorized or made to your knowledge by the Cucamonga Water Company for water leased of the Ontario Power Company?

A No, sir.

Mr. McKinley: Q What do you mean by saying there was none: To your knowledge? That you didn't know of any, or that there wasn't any?

A I don't know of any.

Mr. Goodcell: Q Since referring to those entries in the minutes have you any recollection and can you state what was the amount of water that was received from the Ontario Power Company for which those amounts of money were paid?

A I can't remember.

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C. H. JOHNSON, heretofore sworn and examined, being recalled in behalf of defendant Cucamonga Water Company, testified as follows:

Direct Examination.

Mr. Goodcell: Q Were you connected as zanjero of the Cucamonga Water Company?

A Yes, sir.

Q During what time?

A From December 1902 for five years, I believe.

Q During that time what were your duties generally as zanjero?

A To supervise the works of the Water Company and the turning on of their water.

Q During that time did you have the actual distribution of the water?

A Yes, sir.

Q Was the water of the Cucamonga Water Company actually distributed by you to the parties for their use?

A Yes, sir.

Q All of it or part of it?

A All of it.

Q Do you know whether it was actually used by the parties to whom you distributated it?

A Yes, sir.

Q For what purpose?

A Irrigation and domestic water.

Q What was being irrigated with the water? What kind of crops or plants?

A Quite a variety; vineyards and deciduous and citrus fruits.

Q And during the time you were sanjero was there any surplus of water belonging to the Cucamonga Water Company which was not required to be used for those uses?

A No, sir.

The Court: Speaking of waterbeing furnished for irrigation and domestic use, I suppose they were supplied through the same conduit or system?

A Practically the same; through pressure lines, most of it.

Q Are there cases where they have separate systems?

A A few; yes, there are two different townsites, the North Ontario and West Cucamonga; they take it out of the lines of the Cucamonga Water Company into their own distributing system.

Q Do you furnish to subsidiary companies or do you furnish direct to the consumers?

A Practically direct. This was all stock of the Cucamonga Water Company supplied through those lines.

Q You furnished it only on stock ?

A On stock; yes.

Mr. Goodcell: Q Can you state either from memory or memorandum made at the time the quantity of water distributed by you?

A I haven't those measurements that were turned over to the succeeding zanjero.

Q During the time you were zanjero did you keep any such memoranda?

A Yes, sir.

Q And at the expiration of your term you turned them over to your successor?

A Yes, sir.

Q Mr. Caldwell?

A Well, there was another zanjero in there before him, and I turned them over to him, and he turned them, I presume, to Mr. Caldwell.

Q Have you any memorandum in your possession from which you can state the amount of water which you distributed?

A Not the exact amount; no, sir.

Q You say not the exact amount? Have you any memorandum at all as to the quantities of water which you distributed?

A Not the exact amount to any individual owner, only just the division. Each one got a certain pro rata of the water that was flowing.

Q My question is not with reference to the amount that went to any individual user, but what I want to get at is have you any memorandum or recollection from which you can state the total amount of water which you handled and distributed at any particular time or times?

A I believe the data that has already been turned in covers most of that.

Q Do you have such memorandum.

A It is tabulated; yes, sir; and it is already offered in evidence.

Q By yourself?

A The measurements were made by me under the direction of

Mr. Wright.

Q With reference to the Lone Star system, when did you first have anything to do with any development work in connection with that system.?

A I can't state exactly the year. We retimbered the shafts and tunnels in that location on the Lone Star tract. I think it was about '87 or '88. I can tell better by referring to my notes on the subject. No; the repairs to the tunnels was in '95. That was my first actual work on that tunnel/

Q Did you have anything to do with the original construction of the tunnel?

A No, sir.

Q But you did some repair work in '95?

A Yes, sir.

Q You didn't mean in '85?

A No, sir.

Q Which of theLone Star Tunnels was that?

A That was the upper tunnel.

Q What was the condition of the tunnel at that time?

A It was practically closed.

Q In what way?

A The timbers had rotted out and the ground caved in over the timbers.

Q What did you do in the way of repairs.

A We substituted the timbers and extracted all the dirt that was in there

Q What length or portion of the tunnel did you repair in that way?

A The lower portion up to what is called Well No. 5. I

believe.

Q Did you do any repair work on the tunnel extending beyond well no. 5?

A No, sir.

Q What was the condition of the tunnel above well no. 5?

A That tunnel hadn't beenxxxx run at that time. There was no upper tunnel at that time.

Q The upper tunnel hadn't been run beyond well no. 5 at that time?

A No, sir.

Q At the time that you began making those repairs in '95 what was the condition of the tunnel as to the outflow of the water before you made those repairs?

A We increased the flow of water--

Q What was the condition of the tunnel as to outflow of water before you made the repairs?

A I don't remember the exact measurements. I haven't those now

Q There was water flowing out of the tunnel at that time?

A Very little.

Q And after you completed your repairs what was the result as to any change in the water?

A It increased the flow of water.

Q Can you state to what extent?

A I cannot.

Q Did you make any measurements of it?

A I made measurements, but I don't remember the amounts now

Q Have any of those measurements been given in evidence?

A I don't believe they have. They may have been by Mr. Wright.

Q Mr. Wright participated in those measurements?

A I believe Mr. Wright was the engineer of the company at that timex.

Q Was there any further work done on the Lone Star system after that by you or under your supervision?

A During the five years that I was zanjero from 1902 on.

Q What was done at that time?

A The tunnel was projected ahead (that is, the upper tunnel)-- the lower tunnel, from 200 feet above Base Line on to thiswell no. 5.

Q At that time the lower tunnel had been extended above Base Line at the time you took charge of it?

A Yes, sir.

Q You say you had it extended up to well no. 5. Describe the formation or the nature of the material through which you passed in making that extension of that tunnel.

A Well, it was a varied formation.; partly in clay and partly in loose gravel and boulders, and some in dry gravel.

Q What kind of material did you have at the beginning of thenextension? Describe it in the order in which you came to it as near as you can?

A As near as I can remember the first formation was in clay, and after they broke through the clay they ran into pockets of water bearing gravel, and from that on into dry gravel and into clay again., and finally into the water producing-- or they ran to connect with well no. 5.

Q You began your extension at a point about 200 feet north-

erly from Base Line?

A I think it was about that distance.

Q And you say you were in clay in the beginning?

A At the beginning, yes, sir.

Q Through what thickness of clay did you penetrate at that time?

A I presume they had a run of approximately 50 feet in that clay.

Q What did you strike next?

A Water bearing gravel.

Q And about what distance did you run in that kind of gravel?

A That I can't say. I don't remember what the extent of that was.

Q At the time of beginning that extension was there any water flowing from the tunnel?

A Yes.

Q Can you state how much?

A I cannot.

Q During the time you were running through that clay was there any increase in the flow of water from the tunnel?

A Practically none while we were going through that clay.

Q How was it as to increase of water as you were passing through gravel after extending through that clay?

A There was some increase as they developed further ahead.

Q Can you state anything as to the quantity of the increase?

A No, I can't; I haven't the measurements.

Q Was it a small increase or a large one?

A A small increase.

Q Can you state about what distance you continued in that water bearing gravel before you struck some other formation?

A I can't tell you now; xxxx no.

Q Do you know what kind of formation you struck next?

A Dry gravel.

Q About what distance did you go in the dry gravel?

A That I can't state either.

Q Just what do you mean by dry gravel?

A Practically dry; no water appearing in the face or side of the tunnel at all.

Q How did the other gravel which you term water bearing gravel compare in general appearance and make-up with what yu call dry gravel.?

A In some respects it is practically the same.

Q What was there, if anything, to indicate the passage from water bearing gravek to dry gravel except the absence of water?

A Practically none whatever; simply that it was a little firmer as we ran into it.

Q After passing through the dry gravel what formation did you come to next?

A Clay.

Q How did that clay compare with the clay in which you startd the extension of the tunnel?

A Practically the same formation-- the same kind.

Q About what distance did you continue in that?

A I can't state; I don't remember that exactly.

Q Can you remember whether it was a considerable distance or a small distance.?

A There was none of those clay bodies that were in my estimation more than 50 feet. I can't state as to that exact-

ly. That was the second one.

Q And after you passed through that second body of clay what formation did you come to next?

A I don't believe I could state the nature of that, whether it was water bearing or dry formation. Mostly the remainder of that was in water bearing gravel up to well no. 5.

Q About what distance was it from the point where you left that last body of clay till you reached the well?

A There must have been some two or three hundred feet. I believe it was in water gravel, most of it.

Q How did that water bearing gravel appear as compared with the water bearing gravel that you struck before-- in regard to productiveness of water?

A Practically the same.

Q At the time of reaching the well and before making any connection with the well, about what was the increase in the tunnel outflow as compared with what it was when you began the extension?

A I believe there was an increase of something about 30 inches. To my knowledge, I can't say exactly as to that.

Q Then you continued the extension on and connected with the well?

A With the number 5 well.

Q That well was bored before you made the extension of the tunnel?

A Yes, sir.

Q Do you know about when?

A I can't state the date; no.

Q When you did make the connection with well no. 5

what was the result as to any outflow of water from that well to the tunnel?

A There was an increase of 30 inches at the time we tapped the well.

Q Do you mean an increase of 30 inches in addition to the 30 inches you had before, or 30 inches in all?

A 30 inches in all.-- all the flow of water as we went in would increase and decrease. When they tapped into these water bearing bodies there would be quite an increase, and that would fall down again as we went in with the tunnel, and I can't state whether it was an increase over the already 30 inches or not.

Q After you made a connection with the well was there an outflow of water from the well into the tunnel?

A Yes, sir.

Q And when you obtained that outflow what then was the total outflow from the tunnel?

A I think about between 70 and 80 inches.

Q Did you make any measurement of the water at that time?

A Yes, sir.

Q Have any of the measurements made of that water been given in evidence before?

A That I can't state. The measurements I left with the zanjero following me.

Q Was that tunnel after connecting with well no. 3 extended still further?

A No, sir

Q Have you any memorandum of measurements of water from that tunnel other than those that were turned over to your

successorx?

A Not in my posssession now; no, sir.

Q Did you have anything to do with the construction of the bulkhead in that tunnel?

A Yes.

Q When was that bulkhead constructed?

A The bulkhead on the 35-acre tract was completed July 24, 1903.

Q What was the character of the construction as to its being capable preventing the outflow of water from the tunnel?

A Practically complete.

Q Was it fixed with a gate or any appliance with which the bulkhead could be opened or closed?

A Yes, sir; there was an 18-inch gate valve put in at the stoppage place.

Q When was the bulkhead first closed?

A I think about January, 1904.

Q Have you any memorandum from which you can fix the date?

A Not the exact date; no, sir. We closed the thing down for a while and it affected one of the shafts above and we had to open up again to xxxxxxx repair that shaft. I think that was done in December.

Q 1903?

A 1903; yes, sir. As soon as we got that repaired we shut down again. We got it repaired in January, 1904.

Q What shaft was that that you are speaking of repairing?

A The first or second shaft north of the bulkhead. There was some fault in the construction of that and it settled some and we had to draw the water off to repair that in the bottom.

Q Where was the bulkhead located with reference to well no.5?

A I don't know whether it shows on any of these maps or not, but it was below Base Line quite a ways. I don't know whether I could give you the exact point or not. I presume this is the bulkhead point here, right in that location here. (On exhibit 1.)

Q Independent of the map or exhibit, do you have any definite recollection as to what the distance was from well no. 5.?

A No, sir; I don't remember that exactly. It can be scaled, though. This was about the location. It was above this well no. 6-- I think that was the exact location, I think that is the shaft right there.

Q What was the purpose of that shaft?

A To lower our concrete in for making the bulkhead in the bottom and placing the gate, for conserving the water in the winter time.

Q A working shaft?

A You might call it a gate shaft; so that we could go down and operate the gate below., as to the regulation of the amount of water flowing out.

Q Where was that shaft located with reference to the bulkhead?

A That was what we would call the bulkhead shaft; directly above the gate.

Q When that bulkhead was closed in December, 1903 what effect if any did you notice as to the rise of water back of the bulkhead?

A There was an immediate rise of the water.

Q To what extent did you notice that rise?

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A It went right up before we noticed the shaft settling. I believe we raised it about three feet.

Q How long was that from the closing of the bulkhead?

A Probably 15 days.

Q Then you say that you opened the bulkhead so as to let out the water so as to make some repairs?

A Yes, sir.

Q When was the bulkhead closed again?

A In January, some time; I don't know the exact date. January 1904.

Q How long did it remain closed at that time?

A Until the opening of the next irrigating season in 1904 .

Q When was that?

A I don't remember the date. I left those things with the other zanjero.

Q Did you make any memorandum at the time?

A Yes, sir; there was a memorandum made of the exact dates of opening and closing of the gates of the bulkhead.

Q And that memorandum was turned over to your successor?

A Yes, sir.

Q During the time the bulkhead remained closed from some time in January till it was opened the following spring and summer what did you notice as to the rise of water in the tunnel and shaft back of the bulkhead?

A I believe we stored some 28 or 29 feet of water that season.

Q Did you make any memorandum as to that?

A Yes.

Q Was that also turned over to your successor?

A Yes, sir.

Q From that time on during the time that you continued to be zanjero what was the course as to opening and closing that bulkhead?

A We opened it for irrigation purposes whenever the demand occasioned, which was generally about the first of May.

Q And when it was opened about the first of May it continued open until what time?

A Whenever the season closed. It varied from October to January.

Q Did you make any memorandum of those different times?

A Yes, sir.

Q That was also turned over to your successor?

A Yes, sir.

Q When the bulkhead was closed at the end of any irrigating season state to what extent and how completely it remained closed until the opening of the next irrigating season?

Mr. McKinley: I see Mr. Gray starting away and before he goes I would like to ask him another question.

Mr. Goodcell: Very well; I will withdraw this witness temporarily.

ROBERT GRAY, recalled for further cross examination, testified as follows:

Cross Examination.

Mr. McKinley: Q Referring to the minutes of the Cucamonga Water Company of May 1[illegible], 1903, do you know what the voucher 1270 ~~mf xxx~~, Ontario Power Company $1300.85 was for? Was it not for a balance due on rent which you were unable to pay because you were short of money?

A No; I can't say.

Q You don't know what it was for?

A No, sir.

Q Are those vouchers preserved in the office of the company?

A I presume they are.

Mr. McKinley: Will you produce it?

Mr. Goodcell; yes; if we have it.

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(Direct examination resumed.)

(The question last propounded is read.)

A Practically complete.

Mr. Goodcell: Q About what quantity of water if any would leak out below the bulkhead?

A I never had any exact chance to measure it, but presumably not over a quarter of an inch, as near as I could gauge it.

Q During the time you spoke of the bulkhead as being closed was there any water turned out for domestic purposes?

A A very small amount; possibly an inch, as near as we could get the gate closed.

Q During those different seasons did you make any measurements as to the rise of water back of the bulkhead while the bulkhead was closed?

A Yes, sir.

Q Those also were turned over to your successor?

A Yes; and I believe some of these measurements will show up in the tabulation which I and Mr. Wright made.

Q During the time you were zanjero what connection was there if any between the tunnel no. 1 and tunnel no. 2 of the Lone Star system?

A There was practically no connection between the two tunnels other than a connection that was put in to take the water out from well no. 5 and pump into the upper tunnel. That is, after the water had decreased in the well so that it would not flow out of the upper tunnel.

Q During the time you were zanjero was there any transfer

of water from one tunnel to the other in your operations with the water?

A No; none whatever.

Q Then the water from the lower tunnel was taken ox at weir no. 7?

A Yes, sir.

Q And distributed separately from the water that came from the upper tunnel?

A Yes, sir.

Q During the time you were zanjero was there any pumping plant on the lower tunnel?

A I was assistant zanjero at one time during Mr. utton's time, and at that time I believe there was a pump in well no. 5 into the upper tunnel.

Q Did you have anything to do with the pumping plant during your term as zanjero?

A I supervised the plant, yes, sir.

Q There was a pumping plant in existence while you were zanjero?

A While I was assistant zanjero, during Mr. utton's time.

Q Before or after the time you were zanjero?

A Before.

Q Was that pumping plant installed at well no. 5 before the extension of the tunnel that you have spoken of as having been made to that well?

A Yes, sir.

Q Do you know when that pumping plant was installedx in well no. 5?

A No, sir; I do not.

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Q How long were you assistant zanjero with Mr. Sutton before you became zanjero?

A I was assistant zanjero in '97.

Q Up to what time?

A It was during that season of '97; I can't say just how long. One season.

Q Just that one season?

A Yes, sir.

Q And the pump was operated during that seasonx at well no.5?

A Yes, sir.

Q State if you can what quantity of water was raised by that pump?

A I haven't any record of that. I can't state the exact amount.

Q Was there any measurement made of that water by anyone that you know of?

A I occasionally measured the water, but I don't remember the amount.

Q Do you remember it so that you could state the amount with any approximate exactness?

A I think that pump threw as high as 30 inches of water. It varied from 16 to 30 inches-- a centrifugal 7-1/2 inch p pump.

Q During what length of time during the season of xxxx'97 xxxxxxx was that pump operated?

A That I don't remember; during the irrigating season of '97.

Q Do you know of any memorandum by which that could be fixed?

A I couldn't say whether Mr. Sutton turned in any time or whether the company has it on the records or not. I have none-- not the exact time.

Q Do you know whether or not the pump was operated after '97?

A I believe it was for several succeeding seasons.

Q On what do you base that opinion? You say you believe it was. Did you observe it in operation? Upon what do you base your opinion?

A From the fact that we transferred the pump from well no.5 to what we called well no. 9 which is the upper well-- or well no. 6 on the maps here.

Q At the head of the Lone Star system?

A Yes, sir.

Q You say the pump was transferred from well no. 5 to that upper well.?

A Yes, sir.

Q At what time?

A I believe that was in 1903.

Q That was during the time you were zanjero?

A The first season I was on.

Q Since that time has there been any pumping at well no. 5?

A No, sir.

Q During the time that that pump was at well no. 5 state whether or not it was operated at any time for discharging water or raising water into thelower tunnel?

A No, sir.

Q There was water flowing from thelower tunnel during that time, was there,-- during the time you were zanjero?

A During the time I was zanjero; yes, sir.

Q I understand you that the flow of water from that lower tunnel during the time that you were zanjero was entirely a gravity flow?

A No, sir; we had a centrifugal pump and I don't know the number of the shaft-- the first shaft above the bulkhead-- on the 35 acre tract.

Q Between the bulkhead and well no. 5?

A Yes, sir.

Q And there was a pumping plant at that shaft?

A Yes, sir.

Q When was that pumping plant installed?

A That I can't say.

Q Was that before the time you became zanjero?

A Yes, sir.

Q During part of the time that you were zanjero there were two pumping plants. one at well no. 5 and one below at this other shaft-- one lower down on the tunnel?

A Yes.

Q During what length of time was that pumping plant at that lower shaft operated?

A I couldn't state the exact time of that pumping. Those notes were all turned over to the succeeding zanjero.

Q Can you state from memory during what seasons it was pumped?

A We pumped it the first season and so on, and I believe the second-- 1904 and 1905.

Q Doyou remember about the quantity that was raised?

A In the neighborhood of 40 inches.

Q That water was discharged into the lower tunnel?

A Very little of it into the lower tunnel. Most of it was forced up into the pipe line leading to reservoir no. 1 of the Cucamonga Water Company.

Q You say most of it was raised up. Was some part of that water lifted by that pump discharged into the tunnel?

A Yes, but very seldom.

Q What would be the occasion of discharging water from that pump into the tunnel at one time and not at another time?

A Just according to the demand of the stockholders. The stock in that locality is transferred at times from one piece to another and we have to vary our supply considerable, and that was one of the sources of keeping up the lower system in place of the upper, if we needed it in that way.

Q Is there still a pump at that shaft?

A I believe that pump has been taken out.

Q Do you know when?

A I do not.

Q Was it taken out during the time you were zanjero?

A No, sir. After the pump at well no. 5 was transferred to well no. 6 was there any otherpump put at well no. 5?

A No, sir.

Q Has there been any pumping since then?

A No, sir.

Q Did you have anything to do with constructing or extending the upper ~~xxxx~~ Lone Star tunnel?

A Yes, sir.

Q At what time?

A I worked in that tunnel myself in August and December, '97.

Q State what you did at that time?

A I was assisting in constructing the tunnel.

Q About what length of tunnel existed there when you [illegible] that work?

A I can't state the exact amount. I think we started out at the shaft designated as no. 5 on this map and projected it ahead to well no. 6.

Q When you speak of shaft no. 5 do you mean the same as well no. 5?

A Yes, sir.

Q The present terminus of the lower tunnel?

A Yes, sir.

Q How far did you extend the upper tunnel at that time?

A To well no. 6.

Q Do you remember about what distance?

A No, sir; I do not; the map would show that. I suppose we could scale it.

Q At the time you began that work what was the condition ofnthe upper tunnel as to any outflow of water from it?

A There was waterflowing out of the upper tunnel.

Q About how much.?

A I can't state; I never measured the amount.

Q Can you state approximately?

A No, sir,I didn't take any note of it at the time.

Q Was there much or little?

A I don't remember that; I can't say. A t times there was quite a bit where we were working

Q I am asking now at the time you began your work on the tunnel as to the outflow that existed from the old no. 1 tunnel, before you ~~mak~~ made the extension..

A I didn't measure the amount; I didn't notice .

Q There was some flowing?

A Some from the spot where we started.

Q In what kind of formation did you begin to work in that extension?

A Dry gravel.

Q For what distance did you continue in that dry gravel.?

A I couldn't state the exact distance; I don't remember.

Q Did you make any memorandum or log of the work on either of those extensions?

A None on the upper.

Q Did you on eht lower?

A Yes, sir.

Q Was that included in the memoranda that you turned over to your successor?

A Yes, sir.

Q Returning to the upper tunnel, you began work in the dry gravel?

A Yes, sir.

Q Can you state approximately how far you continued in that?

A The majority of that was in the dry gravel- the majority of the run.

Q Does that mean the majority of the distance in an unbroken stretch of dry gravel, or was it interspersed with other material, sometimes dry and sometimes wet?

A There was some wet gravel or water bearing gravel.

Q After you passed through that dry gravel, as you term it, what formation did you next encounter?

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A The water bearing gravel.

Q Do you remember how far you continued in that?

A I do not.

Q Did you strike any clay in the extension of that upper tunnel?

A None to my knowledge.

Q When you say most of it was dry gravel can you state what proportion of it was dry gravel?

A Roughly estimated, I should say four fifths of it.

Q And the water bearing gravel was in how many places, one or two or more?

A In several different places.

Q What was the effect of that extension as to the increase of the outflow of the water from that tunnel?

A There was some increase.

Q Can you state approximately how much?

A No; I can't.

Q Did you make any measurement of it?

A No, sir.

Q Do you know of any measurement having been made of it? Did you run that extension so as to make a connection with well no. 6?

A Yes, sir.

Q At what time was that connection made?

A I can't state; sometime in December, '97.

Q At the time that you made the connection between the tunnel and the well no. 6 what was the effect as to any outflow of water from the well into the tunnel?

A To the best of my recollection, there was no water flowing from the well at all at that time. I believe it was down

some five or six feet below the floor of the tunnel

Mr. Britt: Q That is well no. 6 at the head of the upper tunnel?

A Yes, sir.

Q Did the water in well no. 6 at any time rise so as to flow into the tunnel?

A Not to my knowledge.

Q You spoke of the pumping plant having been transferred from well no. 5 to well no. 6. When was that with reference to completing the extension of the upper tunnel to well no. 6?

A All the pump we moved was in 1903. Prior to that there had been a pump placed in there, but I don't know the dates.

Q At the time you extended the tunnel connected with no. 6 was there any pumping plant at well no. 6?

A Prior to what time?

Q Prior to connecting the tunnel with the well.

A No, sir; not to my knowledge.

Q Do you know of any pumping plant having been placed in that well prior to the time of moving the pump from well no. 5 to no. 6?

A Yes, sir.

Q At what time?

A That I can't state. The pump was in there when I took charge.

Q There was a pump at well no. 6 at the time you became zanjero?

A Yes, sir.

Q And yet, if I understand you, you also say that a pump from well no. 5 was transferred to well no. 6 while you

were zanjero.

A Yes, sir.

Q Then was the pump from well no. 5 transferred to well no. 6 in lieu of thepump that was before at well no. 6?

A Yes, sir.

Q Was the old pump at well no. 6 operated at all while you were zanjero?

A No, sir.

Q Was the pump at well no. 6 that was transferred from well no 5 operated while you were zanjero?

A Yes, sir.

Q Can you state during what time?

A Not exactly; I think it was continued until we replaced a larger pump.

Q After the pump was moved from well no. 5 to well no. 6 was there any other pump placed at well no. 6 during your term as zanjero?

A Yes/

Q Did you put in a larger pump?

A A larger pump; yes, sir.

Q But thepump that you moved from well no. 5 was operated for a time at well no. 6?

A Yes, sir.

Q One season or more than one?

A I believe two seasons.

Q About how long during the season?

A Practically the whole of the irrigating season.

Q Have you any memorandum showing the exact time?

A No, sir.

Mr. Britt: Q What season was this that you mentioned last?

A That would be the irrigating season of 1903 and '4.

Mr. Goodcell: Q Did you make any memorandum at those times?

A Yes, sir.

Q Was that memorandum turned over to your successor?

A Yes, sir.

Q Can you state from any memorandum that you have or from recollection as to what quantity of water was lifted by that pump?

Mr. Britt: Let me inquire if all the water from those tunnels and the pumps connected with the tunnels subsequent to January 21, 1904, does not appear on plaintiffs' exhibit 3? It rather seems to me that the witness had something to do with the preparation of that exhibit. If that is so, it will save time.

Mr. Goodcell: Show it to him. I don't want to take time on matters that are already in evidence.

Mr. Britt: Q You have seen this tabulation, have you?

A Yes, sir.

Q This weir no. 5, is that the weir you were speaking of last?

A Yes, sir; that is the weir that the water would show over from the pump in well no. 6.

Q And the first date here is January 21, 1904?

A Yes, sir.

Mr. Britt: I think that all that water appears here from and after that date.

A I want to state that I didn't make those first measurements. They were made by Mr. [illegible]. I succeeded somebody that

who came after Mr. Marsh. I can't state the amounts according to the tabulation in these former years.

Mr. Goodcell: Q You are referring to the tabulations as they appear on exhibit 3?

A Yes, sir.

Mr. Britt: And there is an exhibit 11 which shows numerous of Mr. Johnson's measurements, which is a continuation of exhibit 3.

Q Have you any memorandum of any measurements of water that are not included in plaintiffs exhibit 3?

A None that I have in my possession now; no, sir.

Mr. Britt: C. M. Johnson's measurements appear to begin July 7, 1906, on this exhibit.

Mr. Goodcell: Q At what time was the second change made in the pumping plant no. 6 so as to install a larger pump?

A I don't believe I have the exact date of that.

Q I refer now to the pump that was put in in place of the one that was moved from well no. 5.

A I haven't the exact date of that in my possession at present.

Q Can you state about when it was?

A No; I can't.

Q Was that pumping plant operated after that was installed?

A Yes, sir.

Q You made measurements of the amount of water that was lifted?

A From the later pump ?

Q Yes.

A Yes, sir.

Q Is that the same pump that is now on well no. 6?

A Yes, sir.

Q Have you any measurements from the tunnel other than appear in the exhibits already in evidence?

A None in my possession that were made by me.

Q Do you know the well of the Cucamonga Company that has been referred to as well no. 4?

A Yes, sir.

Q How long has that well been in existence if you know?

A That well was bored in 1903 and the first testing was made October 13, 1903.

Q Was that at any time a flowing well?

A No, sir.

Q The testing then was made by a pump?

A Yes, sir.

Q How much water waspumped from the well at that test?

A 11 inches.

Q Has there continued to be a pumping plant at that well?

A Yes, sir.

Q And is now?

A Yes, sirx.

Q During what season has that pumping plant been operated?

A It was operated each year of my looking after the water.

Q That would be during what seasons.?

A From 1903 on for five years, I believe about.

Q State if you can during what length of time during each season the pump was operated.

A I couldn't state exactly. Those notes were turned over to the succeeding zanjero. It wasn't pumped continuously.

Q Does the water from that pump when operated go into the general system of the Cucamonga Water Company?

A Yes.

Q Can you state about what quantity of water was pumped from that well during each of those seasons?

A It averaged 25 inches.

Q Did you make a memorandum of the times of pumping? and of the amount of pumping?

A To a certain extent, yes, sir.

Q What became of that memorandum?

A It ought to be in the possession of the zanjero.

Cross Examination.

Mr. Britt: Q You have mentioned a good many records, notes and memoranda as being turned over to your successor: Is your successor in court as a witness?

A No, sir.

Q What is his name?

A Mr. Jordan.

Q Where is he?

A I don't know.

Q Is he in this country?

A I can't say?

The Court: Q Do you know if these records are here?

A I do not.

Q Jordan is not the present zanjero?

A No, sir.

Q When did you deliver the notes and memoranda and records to Mr. Jordan?

A In August, 1907, I believe, when I quit the Water Company.

Q You have not been zanjero since August, 1907, of the Cucamonga Water Company?

A No, sir.

Q What is Jordan's first name or initial?

A That I can't say. The company's records will show that.

Q Does he continue to be zanjero of the Cucamonga Water Company?

A No, sir.

Q Who is now?

A Mr. Caldwell.

Q Is Mr. Caldwell in court?

A Yes, sir.

Q Do you know whether he has those books and records?

A I don't know.

Q Well K, I understood you to say, was bored in 1903?

A Yes, sir.

Q Did you have anything to do with the boring or supervision of it personally?

A The supervision of the boring; yes, sir.

Q What is the depth of the well?

A I never measured the exact depth. I wasn't there at the time it was measured.

Q You don't know what the depth of the well is?

A As near as I have heard--

Mr. McKinley: We object to what he heard.

The Court: Sustained.

Q Was there a record kept of the discharge of that well by the pump?

A Yes, sir.

Q Who has the record now?

A Mr. Jordan, I presume; whether he has turned it over I don't know.

Q Who kept the records? Yourself?

A Yes, sir.

Q Do you know whether Mr. Caldwell has the record of well K in court?

A I don't know. I believe not.

Q You say the well was tested in October, 1903?

A October 13, 1903.

Q Had the well been pumped previous to that?

A No, sir.

Q Was it pumped after that during that season of 1903?

A Yes.

Q Did you make a record which would show how long it was pumped during that season of 1903?

A Yes, sir.

Q Did you make a record which would show how long it was pumped that season?

A No, sir; I have no record of that.

Q Did you make any and turn it over to Mr. Jordan?

A It was turned over in the papers.

Q You did make a record?

A Yes, sir.

Q Does the record show the length of time that you pumped that season and the next and the following years?

A It was pumped the succeeding years; yes, sir.

Q What I am getting at is whether the times when it was pumped appeared in this note or memorandum or record that

you delivered to Mr. Jordan.

A Yes, sir; it should appear.

Mr. Britt: We request the Cucamonga Water Company to produce those notes, memoranda and records made by the witness, if they are now in existence and in the control of the company.

Mr. Goodcell: If they are we will produce them.

Q Have you had anything to do with this water system since August, 1907?

A Not in connection with the Cucamonga Water Company, no, sir.

Q Have you retained any records or any books containing entries of wells or tunnels or elevation of water or quantity of waterproduced by anyone of these various wells or tunnels, which were in any way underyour direction? Have you retained any such records that you did not deliver to Mr. Jordan or to some officer of the Cucamonga Water Company?

A None to my knowledge; no, sir.

Q I notice that you have referred to a memorandum book several times during the course of your examination here. Do you keep anything in that book,-- any minutes of your observations during the time you were zanjero?

A There was a few of the original notes in the book and notes that I have taken from my private diary.

Q Who spreceeded you as zanjero?

A Mr. Jordan.

Q Preceeded you ?

A Oh, no; Mr. Sutton.

Q You came in in December, 1902?

A Yes, sir.

Q Did you have charge of the water of the Cucamonga Water Company which at that time came from the Hady Tunnel.?

A Yes, sir.

Q Did you keep any minutes of the quantity received by the Cucamonga Water Company during 1902 or '3?

A Yes, sir; they were turned over to Mr. Jordan, and also ~~xxxx~~ some that appear in the tabulation that you have-- turned over to Mr. Wright.

Q You speak about repairing the Lone Star Tunnel no. 1 about 1895. Did I understand you right, that it was the Lone Star Tunnel no. 1 which you assisted in repairing in 1895?

A I believe that is a statement that I made.

Q And you have some entries relating to itin your memorandum book,?

A It is copied from my private diary.

Q What is the entry that you have in your book?

Mr. McKinley: Objected to as incompetent. He is asked to state the entry in this book which he says was copied from his private diary.

Mr. Britt: You object on the ground that it is a copy?

Mr. McKinley: Yes.

Q Where is your private diary?

A At home.

Q When did you make this copy?

A Several days back.

Mr. McKinley: I withdrew the objection.

Q What is your note or memorandum?

A Repairs to tunnels in June, 1895.

Q That is all you have?

A Yes, sir.

Q Were you employed to work on that tunnel for the purposes of repair?

A Yes, sir; I was supervising the work.

Q Supervising the work?

A Yes, sir.

Q Do you know at the time you began the labor of the repairs how long that tunnel was?

A It was completed up to what is stated there as well no. 5.

Q Was that as far as it was completed.?

A Yes, sir.

Q It extended then from the lower end to well no. 5?

A Yes, sir.

Q What did you do to repair it?

A We replaced the timbers and took out the dirt that had caved in from the sides of the tunnel.

Q Was there any measurement of the water flowing from the tunnel that you know of at the time you began your repairs?

A No, sir; I don't remember the measurements that were taken. I don't remember the measurements.

Q Did you make an extension of the tunnel at the same time that you made those repairs?

A None whatever.

Q Just cleaned up the old tunnel?

A Just cleaning up; yes, sir.

Q Do you know of any measurement of water that was made

after you completed the tunnel repairs?

A There were water measurements taken, but I can't state. Mr. Spencer was zanjero and I was working under him.

Q That is the upper tunnel?

A Yes, sir.

Q, And then some years later the upper tunnel was extended as far as the present well no. 6 at the head of it?

A Yes, sir.

Q Did you work on that extension?

A Yes, sir.

Q Have you got a memorandum of that? You stated it to Mr. Goodell, but if I remember right you were not definite as to the year.

A No, sir; not exact.

Q You have no written memorandum.?

A Nothing only what I took from the book-- Yes, I gave the dates of that. It was August and September, 1897, the continuation of the Lone Star Tunnel.

Q Was it finished at that time?

A Yes, sir.

Q To an intersection with well no. 6?

A Yes, sir.

Q Well No. 6 had been put down previously?

A Yes, sir.

Q I understood you to say that the tunnel cut the well about six feet above the water in the well?

A To my knowledge it was about that. It was some below the floor of the tunnel, and I think about that.

Q Was there a pump on the well at that time?

A No, sir.
Q Had there previously been a pump on the well?
A No, sir.
Q Was it a new well or an old one?
A A new well.
Q Was it put down that season?
A That I can't state exactly. I believe it was very close to there,-- between '96 and '97 that the well was put down.
Q Had well no. 5 been pumped previously?
A I don't believe there was any pumpx in there at that time. I think it was installed several years later than that and I can't testify to that accurately.
Q I understood you to say that there has been no pumping at well no. 5 since 1903?
A Nonewhatever.
Q Have you any information about the turning of water into those tunnels from the loamosa plant?
Mr. McKinley: Objected to as not cross examination.
Mr. Britt: I asked him if he had any information about it.
Mr. McKinley: Then it is hearsay.
The Court: Overruled.
Q Have you any knowledge of the turning of water into these tunnels from the loamose plant?
A Yes.
Q Do you know when that began?
A I supervised the turning in of water February 4, 1907.
Q Was that the first time?
A Yes, sir.
Q Did you make any measurement of the quantity?

[illegible] OFFICIAL REPORTER SUPERIOR COURT

A Yes, sir.

Q What was the amount?

A 25 inches.

Q How long did it continue to run through the tunnel?

A I couldn't say the exact date; I believe it was about th first of June that we turned it back to the Ioamosa line-- that same year.

Q Did the same quantity run all the time or whenever you measured it?

A Yes, sir; it was practically the same.

Q Into which one of the tunnels was that water poured.?

A It was poured into the lower tunnel.

Q That was tunnel no. 2 of the Cucamonga Water Company?

A The lower Lone Star Tunnel.

The Court: Q You mean that when it is turned back to the Ioamosa people in Junen that you didn't use it any more that year?

A No, sir.

Mr. Britt: Q Describe briefly the manner in which that water was received and poured into the tunnel. It came through a pipe, did it?

A Yes, sir!

Q From where? From the northeast?

A Taken from the northeast from a continuation of this avenue up here-- the end of the Ioamosa pipe line-- and dropped into a shaft close to well no. 5.

The Court: What avenue do you mean?

A That doesn't continue up there. It is Hellman A venue below here.

Q It is the extension of Hellman Avenue?

A Yes, sir.

Mr. Britt: Q You are referring to map plaintiffs exhibit 1?

A Yes, sir.

Q It was turned into a shaft near well no. 5?

A Yes, sir.

Q Was that shaft specially constructed to receive that water, or was it an old shaft?

A Well, I said it was a shaft; but it was a well casing. I believe it was one of the various casings put down there in draining the ground so that we could tap well no. 5.

Q And that water reached the tunnel at what depth below the surface of the ground?

A I never measured accurately; it was approximately 140 feet at that point, or 150 feet.

Q The water received from this pipe line of the loamosa Company is turned into that well casing close to the top of the ground?

A Yes, sir.

Q And when it descends the distance of 140 feet has it any means of egress through that tunnel and the bulkhead below--any way of getting out except through the bulkhead?

A No, sir.

Q Did you keep any observations on the elevation of the water in that shaft into which that water was poured from the loamosa Company in which the water stood at any fixed, fluctuating or variable elevation, or did it go right down into the tunnel?

A It went right down into the tunnel. and of course it

was sympathetic with all the water that was in there. The height of the bulkhead would show that.

Q Did that water ever rise into the first Lone Star tunnel or the older Lone Star Tunnel?

A No, sir.

Q I understood you to say that there was a connection between the two tunnels by means of a shaft.

A Yes, sir; there was a shaft around that original pumping plant at no. 5; there was a short drift from well no. 5 into this upper tunnel so that we could use that to convey the water that we pumped out of no. 5 into the upper drift -- the upper Lone Star.

Q Let me see if I understand you: Well No. 5 is in the upper Lone Star Tunnel ?

A It is off to one side about 7 or 8 feet off to one side of the upper Lone Star Tunnel.

Q Did it connect with the Lone Star Tunnel; was there a gallery there?

A Yes, sir; a gallery.

Q A connection between the Lone Star Tunnel and well No. 5?

A Yes, sir.

Q I understood you that up to '97 it was the head of the upper Lone Star Tunnel and that that year you ran an extension?

A Yes, sir; August and December, 1897.

Q Now then, does this shaft which connects the upper Lone Star Tunnel with the lower Lone Star Tunnel connect them near that well no. 5?

A The gallery; yes, sir.

Q And what is the depth of the lower Lone Star Tunnel below the upper Lone Star tunnel at that point where the shafts or galleries connect?

A Approximately 100 feet.

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Here the Court takes a recess until tomorrow, April 20, 1909, at 10 o'clock a. m.

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J. M. McKINLEY.

IN THE

Superior Court

OF THE

County of San Bernardino

State of California

Cucamonga Vineyard Company, et al.,

Plaintiffs

vs.

San Antonio Water Company, et al.,

Defendants

Vol. 56.

Monday, April 20, 1909

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JOS. E. RICH, Official Reporter

Tuesday, April 20, 1909. Fifty-sixth day.

F. C. FINKLE.

F. C. Finkle, recalled for the purpose of correcting his testimony, corrected it as follows:

The Witness: On page 3978, the first matter I wish to call attention to is the way the question of the court is reported. It would appear that the word "air" should be water.

Page 3979, line 2: Insert the word the before the word "formula" instead of the word "a."

Page 3979, line 7: The word "impedence" is written "impedience."

Page 3980; line 7: Change the word "and" to "as", being the word next to the last in that line.

Page 3981, line 17: Add the word "of" to that line after the last word "supply" in the line.

Page 3986, line 5: Change the word "geologic" to "geological".

Page 3987, line 10: The figures in that line "1907-1906" should be changed to "1891-1892."

Page 4001, line 22: Strike out the word "supply" before the word "north".

Page 4002, line 7: The word "ordinant" should be "ordinate"

Page 4006, line 1: Change "give" to "given".

Mr. Britt: Such corrections as that are not worth the consumption of time.

Page 4010, line 24: The figures should be "378" instead of "372".

Page 4030, line 14: Insert the word "at" between the last two words in the line.

OFFICIAL REPORTER, SUPERIOR COURT

Page 4039, I wish to call the attention of the court, on line 14, where it reads "You speak of the draft increasing the replenishment by a certain percentage," which, from the context, it appears should read "You speak of the draft exceeding the replenishment by a certain percentage."

Page 4041, insert the word "of" after the word "ditch" in line 27.

Page 4045, line 21, change the word "tops"to "top."

Page 4049, line 26, change the word "distance"to "destination."

Page 4050, line 21, change the word "was" to "were".

Page 4053, line 19, strike out the word "that" before the word "canyon", and insert the word"Cucamonga."

Page 4056, line 4, change the word "haven't" to "have."

Page 4063, line 4, change the word "lines" to "legends;" also line 24, change the word "acts" to "acting."

Page 4064, line 17, change the first word in the line "No" to "Yes", andinsert after the word "sir","it wasn't." The line should read, "Yes, sir, it wasn't; that was the reason I took that."

Mr. Britt: That is changing the substance of the testimony.

A I don't think so. Your question was "Do you know whether Well No.3 was being pumped?"

Page 4097, line 2, the fourth word in that line should be "that" instead of "of."

Page 4098, line 7, insert the word "that" after the first word in the line.

Page 4099, line 12, change the word "and" before "duct" to "any."

Page 4100, line 6, change the second word of the line "in" to "when."

Page 4101, line 3, insert the word "not" between the words "would" and "point".

Page 4101, line 23, the first word in the line "and" should be omitted.

Page 4102, line 1, change the word "and" to "in".

Page 4106, line 2, the word "rise" should be "fall".

Page 4106, line 21 on that page, the words "I should say in Exhibit J" should be stricken out, and the words "page 91" inserted. That is a mistake of my own in referring to the wrong citation, and I wish to correct it.

Page 4107, line 1, the word "defendants" should be changed to "transcript."

Page 4124, line 14, change the word "Hoppy" to "Hobby".

Page 4134, line 24, the word "that" after the word "explanation" should be stricken out.

Page 4146, line 3, the answer is marked "question."

Page 4150, line 19, the figures "20" should be changed to "24", before the word "inches."

Page 4171, in line 15, the last word of the line "wells" should be "well."

Page 4179, line 5, the word "find" should be changed to the word "fine."

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OFFICIAL REPORTER, SUPERIOR COURT

Mr. Conner: I offer in evidence the articles of incorporation of the Pomona Water Company, filed in the office of the clerk of the county on October 15th, 1887, and in the office of the Secretary of State, October 20th, 1887.

Said document is admitted in evidence and marked

DEFENDANTS' EXHIBIT Z 17.

Mr. Conner: I have here my chains of title of the three pieces of land, and I would like to have some understanding by which they may be filed without taking up the time to read them.

Mr. McKinley: Just let them be filed. That is satisfactory to us, as far as we are concerned.

The Court: Would you be willing to stipulate that the certificate of title may be deemed as a full chain of title, subject to the practice we have been following here, of requiring the production of the originals, if desired, before the case is finally submitted.

Mr. McKinley: That is entirely satisfactory to us.

Said certificates of title are admitted in evidence, and marked respectively

DEFENDANTS' EXHIBIT Z 18

DEFENDANTS' EXHIBIT Z 19

DEFENDANTS' EXHIBIT Z 20

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Mr. McKinley: We would like to offer in connection with the cross examination of Mr. Gray, the item in the minutes to which his attention was called: On May 15th, 1903, the minutes of the Cucamonga Water Company showing voucher No.1276

Ontario Power Company, $1336.05; and the voucher which has been produced by the Cucamonga Water Company, is a receipt for that amount.

The Court: Does the voucher show what it was for?

Mr. McKinley: Yes, sir; it shows that it was a balance for leased water of 1902.

Said entry and voucher are admitted in evidence, and marked, as to said voucher,

DEFENDANTS' EXHIBIT X 21.

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W. B. JOHNSON.

W. B. Johnson, previously sworn, recalled by defendant, Cucamonga Water Company, testified as follows:

By Mr. Goodcell: Q In the distribution of water to water users, during the time that you were zanjero, was there any quantity of water which was known as a full head of water?

A No, sir.

Q Do you know any quantity of water that is designated as a full head of water if you have that quantity?

A That should amount to a 30-inch run for 24 hours, that is, allowing an inch to ten acres.

Q During the time that you were zanjero, in distributing that water, was it distributed in full heads?

A Well, as near as we could get to a full head. We pro rated the water out, according to the amount there was at the head.

Q Was it in fact distributed in full heads, was the question.

A Yes, sir.

Q You distributed water in 30-inch heads?

A Not in 30-inch heads, no, sir; as near as we could get to that amount.

Q That is what I am asking you, whether you distributed the water in full heads; did you distribute the water in heads of 30 inches each?

A No, sir.

Q Did you distribute more or less than thirty inches as a head?

A Less.

Q Why?

A There was not a sufficient quantity to make the full head.

Q During what portion of your time as zanjero, did that condition exist?

A The full five years that I was on, from 1903 to 1907.

Q You say the full head of thirty inches is the allowance for ten acres for a 24-hour run?

A Yes, sir, that is the proportion, an inch to ten acres, 24 hours.

Q How often would these heads recur?

A Once a month.

Q In the running of the extension of the lower Lone Star Tunnel, you speak of passing through quite a body of clay, at or very nearly the beginning of your extension work; did you notice anything in course of that work to indicate the slope or strike of that deposit of clay?

A Well, where it left to go into the gravel-bed I did.

Q What did you observe there.

A There seemed to be about a thirty degree dip along there.

Q What did you observe at that point to indicate the dip of the clay beds?

A Well, the appearance of the gravel in the top of the face showing up first, finally decreasing on that angle.

Q If I understand you, when you passed through the clay, you struck gravel first in the top of the tunnel?

A Yes, sir.

Q And then gradually tapered off toward the bottom of the tunnel?

A Yes, sir.

Q You estimate the angle to be about how much?

A Why approximately a 30-degree angle.

Q How did the gravel that you took out of that tunnel, both Lone Star tunnels for that matter, compare with the gravel a of a creek wash, the surface gravels?

A Why it was somewhat of a different formation; there was not the large boulders in it that were in the creek formation.

Q About what was the size of the gravel as to coarseness or fineness?

A I should judge a fourth or a fifth smaller than the wash gravel and boulders.

Q How large gravel did you find?

A Well, that would be pretty hard to state; of course there was different sizes; we would occasionally strike one that would run through a foot or a foot and a half in diameter.

The Court: Q Do you mean that was the largest size?

A Yes, the largest size.

Q And state whether or not there was any large proportion of coarse gravel?

A No, the larger proportion was the smaller gravel.

Q Would the smaller gravel be found in one place and the coarser gravel in another place. or how would that be in that respect?

A Well, it seemed to be distributed very unevenly; I don't know as there was any regular proportion to it at all; some sections it seemed fairly even.

Q How about the hardness?

A It was a softer material than the wash gravel.

Q And you speak of the gravel itself -- the rock?

A Yes, sir, the gravel.

Q Softer than the surface gravel?

A Softer than the surface gravel.

Q At what time did you begin the turning of the loamosa water down into the tunnel?

A That date is on record; I gave that yesterday.

Q Was that during the last season you were zanjero.

A Well, it was turned in each and every season after we put it in there in my time.

Q Was it turned in in your time, during more than one season?

A Yes, sir.

Q Can you state during what length of time for each season

A During the non-irrigating period.

Q And as to the quantity?

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A 25 inches.

Q Was that a regular quantity, or did the quantity vary?

A Approximately regular, yes, sir.

Cross Examination.

By Mr. Britt: Q Did you have charge of the turning in of that water out of the Iosmosa pipe after 1907?

A No, sir.

Q I believe you stated that it began in February, 1907. I want to know whether you observed it any more than that single season?

A That was the date I have given you, February 4th, 1907.

Q Are we to infer that you observed it during that season only, 1907?

A As far as my supervision went, yes, sir.

Q When that water was turned in from the Iosmosa pipe, it mingled with the water in the lower Lone Star Tunnel, did it?

A Yes, sir.

Q Above the bulkhead?

A Yes, sir,

Q Was there any outlet or means for its escape, other than its percolation through the earth?

A No, sir.

Q I asked you yesterday about some memoranda and records which you had kept in former years and which you delivered, I understood you to say, to your successor, Mr. Jordan: Have you made any inquiry about those?

A There is no way of getting Mr. Jordan that I can find; I don't know his location at all.

Q Has he left the country, or do you know?

A That I couldn't say; I couldn't find out at all from any source that I could resort to on that notice.

Q He is not now in the employ of the company?

A No, sir.

Q You don't know where these memoranda and record and materials are?

A No, sir.

Q You have no way of finding out.

A Not to my knowledge.

Mr. Haskell: Q In running this lower tunnel, I understood you to say you penetrated the strata of clay: Was that clay mixed with gravel, had gravel in it.

A There was very little gravel, if any, in it; practically all clay.

Q What was the color of it?

A It had a brownish appearance, between a red and a brown.

Q Similar to the surface of the Red Hills in color?

A I don't know as I have compared the two closely; I should judge very close to that.

Q And in texture?

A Texture about the same.

By Mr. Britt: Q Are you describing material from the lower Lone Star Tunnel, or upper Lone Star Tunnel?

A The lower Lone Star Tunnel.

Mr. McKinley: Q There was a shortage at all times with reference to the heads of water of the Cucamonga Water Company during the time you were zanjero as I understand?

A Yes, sir.

Q And as a result of that, you were trying to get all the water you could from your wells?

A Yes, sir.

Q And pumped them pretty generally during the irrigating season.

A Yes, sir.

Q Whenever the machinery was in condition to do it, I suppose?

A Yes, sir.

Q Now this lower tunnel that you speak of, was constructed through the earth -- there was no lining to it, or cement, or anything of that kind?

A Nothing only the wood timbering.

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E. J. CALDWELL.

E. J. Caldwell, a witness called by defendant, Cucamonga Water Company, being first duly sworn, testified as follows:

Direct Examination.

By Mr. Goodcell: Q You are the present zanjero, of the Cucamonga Water Company?

A Yes, sir.

Q How long have you been such zanjero?

A Since 1909 is all -- one year.

Q Who was your immediate predecessor as zanjero?

A His name was Mr. Jordan.

Q What memoranda of measurements or of data of any kind did Mr. Jordan turn over to you as zanjero?

A Why I had none -- none at all.

Q Do you know of any memoranda of any kind that Mr.Jordan

had in his possession?

A I do not.

Q Do you know of anything of the kind having been left by him anywhere?

A No, sir.

Q Do you know of the existence of anything of the kind?

A No, sir.

Q During the time that you have been zanjero, what has been done if anything in the way of turning in the Toamosa waste water into the Lone Star Tunnel?

A Why I have some measurements for the year 1909.

Q Has the water been turned into that tunnel at any time?

A Yes, sir.

Q During what time?

A In 1909 I have some measurements.

Q During what time has the water been turned into the tunnel?

A Why, in January 15th, 1909.

Q Was that the beginning of it being turned in last season?

A Yes, sir.

Q Up to what time did it ~~as~~ continue to be turned in there?

A April 1st it was closed.

Q What was the quantity of water that was so turned in there?

A 16 inches.

Q And did it continue 10 inches during the whole period?

A Yes, sir.

Q You say you have some measurements of that water?

A Yes, sir, I have.

Q Do those measurements all measure 18 inches?

A Yes, sir.

Mr. McKinley: I think the witness was zanjero in 1908?

A I had charge of this Loamosa water -- turning that in in 1908.

Q But you were not zanjero at that time?

A No, sir, I was not zanjero at that time.

Q During what time in 1908?

A Why, January.

Q Any more than in January? Did it begin and end in January.

A Yes, sir, it begins in January. It doesn't end in January.

Q I ask you during what time, and you say in January.

A From January 19th.

Q That was 1909?

A 1908.

Q From January 19th up to what time?

A April 1st.

Q That was in 1908?

A That was in 1908, yes, sir.

Q That is the time you refer to it as having been 10 inches?

A Yes, sir.

Q During what times?

A In 1909, December 15th -- no, I am mistaken. I haven't just got those measurements. I have them, but I haven't got them in this book. I have the measurements when the water was turned in in 1909, but not in this book.

Q During last winter season, at what time was the water turned in, if you can state from your memory.

A I think it was about January.

Q And continued up to what time?

A Well, we still continued it.

Q What quantity has been put in this season.

A I may have those measurements.

Q Can you state from memory about what quantity it was?

A About 18 inches for awhile, and then we have a larger pipe put in which increased the flow -- I don't just find those measurements.

Q When was that larger pipe line put in?

A It was put in I think in February, that it was finished.

Q What year.

A 1909.

Q What pi is that pipe line used for?

A For the waste water of the Loamosa tract.

Q Constructed on purpose to bring the waste water to that tunnel?

A Yes, sir.

Q Since the construction of that larger pipe line, what quantity of water has been discharged from that pipe line into the tunnel?

A Well, we have been drawing about 10 inches.

Q About how many acres of land are served by the Cucamonga Water Company for irrigation?

A About 2000.

Q What are these lands planted to.

A Citrus, deciduous, and some vines.

Q Have you made anything of any estimate as to the quantity of each kind?

A Yes, I have.

Q Give the result of that estimate -- and, in the first place, let me ask you another question: You are acquainted with all the lands that are supplied with water by the Cucamonga Company?

A Yes, sir.

Q And their condition as to being planted or otherwise?

A Yes, sir.

Q Did you prepare this estimate zf from your personal knowledge of these lands?

A Yes, sir.

Q State the result of your estimate, showing the acreage to the different kinds of growth.

A 516 acres of citrus, about 1000 acres of deciduous, and vines about 300.

The Court: Q Any alfalfa?

A No alfalfa.

Mr. Goodcell: Q About what are the ages of the trees?

A Well, most of them are pretty old trees.

Q About how old does that mean?

A I should judge in the neighborhood of 15 or 20 years old.

Cross Examination.

Mr. Britt: Q Mr. Caldwell, from what sources did you prepare this statement of acreage? Did you make a list of your own knowledge of the various areas of individual owners?

A Yes, sir.

Q Then it is a fairly accurate statement?

A Yes, sir, it is.

Q 816 in citrus fruit?

A Yes, sir.

Q And about a thousand in deciduous fruit?

A Yes, sir.

Q And about 300 in vines?

A Yes, sir.

Q That would make 2116 in acres in all?

A Yes, sir.

Q Did you know this man Jordan personally, who preceded you in the office of zanjero?

A Yes, I was acquainted with him.

Q Did he quit work at the time you began?

A He did.

Q What did you receive from him? Anything at all, in the way of office furniture, books or papers?

A Nothing but a desk.

Q You received from him no memorandum or books or papers containing measurements of water?

A No, sir.

Q Or records of measurements of water?

A No, sir.

Q Nor logs of wells or tunnels, or anything of that kind?

A No, sir.

Q Did he say anything to you about having such things in his possession?

A No, sir.

Mr. Goodcell: Q Do you know what has become of him?

A No, sir, I do not.

Mr. Britt: Q At what time was that dash turned over to you?

A I think it was in January, 1908.

Q Did you notice the water turned into the lower Lone Star Tunnel from the Ioamosa waste pipe? Did you measure it yourself?

A Yes, sir.

Q You say since about February of this year there has been about 20 inches?

A Yes, sir.

Q And before February it was about 10 inches?

A Yes, about 10.

Q And it was about 10 inches in the spring of 1908?

A Yes, sir.

Q Did you observe whether it rose in the shaft in which it was turned to any considerable height?

A In 1909, I have, but in 1908 I didn't.

Q Is the water yet pouring into that ~~haftx~~ shaft?

A Yes, sir.

Q About what distance is it brought from the Ioamosa pipe lines?

A I think it is in the neighborhood of 3000 feet to their pipe line.

Q Who built the pipe line through which it was brought?

A Mr Flusman.

Q I don't mean the person who had individual charge of the construction, but what company?

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A The Cucamonga Water Company.

Q That pipe line runs uphill to reach this shaft into which it is poured?

A No, sir.

Q You say that you noticed that it stood in the pipe -- rose somewhat in the pipe -- after you began to pour your stream of 60 inches?

Mr. McKinley: He said he noticed whether it did or not.

Q What did you notice about the elevation of water in this shaft through which it is poured into the Lone Star Tunnel?

A Well, I made no measurements of the shaft in which it is poured in.

Q Did you make measurements anywhere?

A Yes, sir.

Q Where?

A In the shaft below.

Q Is there a shaft lower down, which reaches from the surface of the ground into the Lone Star Tunnel?

A Yes, sir.

Q To the lower Lone Star Tunnel?

A Yes, sir.

Q What is the depth of that shaft from the surface of the ground to the tunnel?

A The depth of the shaft to the tunnel?

Q Yes. I mean the one through which you made the measurements.

A 127 feet from the surface of the ground to the tunnel.

Q And at what elevation did you observe the water stood in the shaft?

A I don't just understand you.

Q If I correctly understand your answers, the water rose in this lower shaft from the tunnel after you began to pour in the 60-inch stream about February of the present year?

Mr. Schinley: He hasn't said that. He said he had made measurements, but he hasn't yet said it rose.

Q Did you say , or is it a fact, that the water rose in that 127-foot shaft above the tunnel?

A Yes, sir.

Q When did you notice the rise?

A The first measurement I made of it was about two weeks after we began pouring the water in.

Q After you poured in the 60-inch stream or the 15-inch stream?

A The 60-inch stream.

Q The large stream?

A Yes, sir.

Q Have you made measurements of it since that first time?

A Well, no; I have no measurements of it.

Q What did you observe at the time of that first measurement?

A I observed that it raised in the neighborhood of about one foot per week.

Q How high did it stand in the shaft above the tunnel, or from the surface of the ground either?

A It stands now about 57 feet, below the surface of the ground.

Q That much above the tunnel?

A Yes, sir.

Q Is it that much above the tunnel; or that much below the surface of the ground?

A That much above the tunnel.

Q When did you make the last measurement.

A I don't just remember.

Q Where did you get these figures, 27 feet?

A It is from my measurements. I don't just recollect what date it was that I measured that.

Q And that is the last measurement you made?

A Yes, sir.

Q Do you know about how long ago?

A I think about a week ago.

Q Previous to turning in the 00-inch stream, did you notice that the water stood at all above the tunnel in this last mentioned shaft -- before the large stream was turned in?

A Yes.

Q What did you notice?

A I don't know the exact measurements.

Q Did it rise before, in the shaft?

A Before; yes.

Q You don't know to what extent?

A No, sir.

Q This shaft is above the bulkhead.

A Yes, sir

Q Besides that quantitity of land, 3116 acres, in deciduous fruits, trees, fruits and vines, are there other lands irrigated by your company -- the Cucamonga Water Company?

A Yes, sir.

Q Consisting of what.

A Potatoes.

Q Any other vegetable crops?

A No, I believe not.

Q What acreage of potatoes?

A In the neighborhood of 200.

Q Do you know of any other garden truck -- any considerable acreage of it?

A Possibly 10 acres.

Q Strawberries or berries, or small fruits?

A No, sir, not to speak of.

Mr. McKinley: Q When you fixed the amount of 2000 acres you meant the amount of land that is entitled to irrigation from your company?

A Yes, sir.

Q And part of this excess over the 2100 acres and 200 acres of potatoes is not irrigated?

A The potatoes are irrigated.

Q But there was three or four hundred acres more?

A Yes; we had some eucalyptus and some land that we didn't use water on.

Q They used the water on the portion that they have planted?

A Yes, sir.

Q There are places which are not planted?

A Yes, sir.

Q Is water used on all this vineyard?

A There is water stock with a good deal of it, but there is

some that the water is not used on.

Mr. Britt: Q How much?

A I would think there was 100 acres that used their water on their vineyards.

The Court: Q About half of it.

A Yes, sir.

Mr. McKinley: Q With regard to this water coming in from the Ioamosa Company, how did you measure it?

A From the Ioamosa.

Q Yes.

A We have a weir.

Q Did you make regular weir measurements?

A Yes, sir.

Q Now, with regard to the distance it stood above the tunnel, when that 60-inch stream was poured in, you are unable to fix that at all?

A Yes.

Q Can't even approximate it?

A No, sir.

Q Did it stand a considerable distance up the shaft?

A Yes, sir.

Q -0-

GEORGE E. KEYES.

George E. Keyes, a witness produced by the defendant, Cucamonga Water Company, being first duly sworn, testified as follows:

Direct Examination.

By Mr. Goodcell: Q You are secretary of the Cucamonga Water Company?

A Yes, sir.

Q How long have you been such secretary?

A I think it was 1903, or the last part of 1902 that I commenced. I think it was December or January, I don't remember which.

Q Do you remember Mr. Jordan who was zanjero?

A Yes, sir.

Q What books, papers or memoranda did Mr. Jordan leave with you or in your custody.

A He never left any that I have any remembrance of.

Q Do you know of the existence of anything of the kind?

A No, I do not.

Q Are you able to state whether there are any such books or papers, or memoranda among the papers of your office?

A I don't think there is. I don't remember seeing any such papers.

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E. T. WRIGHT.

E. T. Wright, heretofore sworn and examined, being recalled by defendant Cucamonga Water Company testified as follows:

Direct Examination.

Mr. Goodcell: Q How long have you known the wells and tunnels of the Lone Star system or the Cucamonga Water Company ?

A Ever since they were constructed.

Q Did you know the locality before any of them were constructed?

A Yes, sir.

Q What was the condition at that locality as to the existence of any rising or flowing water there, before any artificial developments ?

A There was a small stream or spring that we called the Lone Star spring, about 500 feet, I think, above the Base Line, in a little ravine. It flowed out in the neighborhood of two inches of water.

Q What was the first work done there in the way of development?

A It was to run a tunnel commencing perhaps 50 to 100 feet above the Base Line, right up that ravine, practically following ~~tmx~~ along the ravine, and opening it up in the way of a tunnel probably 500 feet long. That was done in 1887.

Q What was the result if you know, as to any increased flow of water from the tunnel?

A We increased the flow by giving more area I presume, and I think it rose from two inches to as high as 15 inches. We had the measurements made.

Mr. McKinley: I move to strike out the statement "I presume by giving more area" as not responsive.

The Court: Stricken out.

Q What was the character of that increased flow as to permanence?

A It began gradually to fall after the first year, and ran down two or three years to about seven igches.

Q What was the next development work in that locality.

A The next development work in there was in 1897, when we drilled the wells known here as Lone Star number 5 and 6, and commenced at the end of the tunnel which is about at Lone Star well No.5, and extended the tunnel on to Lone Star No. 6.

Q When you say we, whom do you mean?

A I mean the Cucamonga Fruit Land Company, which had at that time the title to the property before they deeded it over to the water company.

Q You were connected with that company?

A Yes, sir.

Q One of the directors of the company?

A Yes, sir.

Q Can you state the depths to which these wells were bored?

A I can state that I know one was very near 500 feet, and the other was something over 500, and that they are given on one of the exhibits in the case already in testimony.

Q What was the result as to any productiveness of water?

A It increased the water supply.

Q Well No. 5 you say is practically at the head of the old tunnel?

A Yes, sir, the tunnel that was run in 1897.

Q And that well was connected with the tunnel?

A Yes, sir; but the well was not bored until 1897.

Q But when that well was bored, it was bored --

A It was cut off at the floor of the tunnel.

Q At the head of the Lone Star Tunnel?

A Yes, sir.

Q And when part of it was cut off, so as to flow into the tunnel?

A Yes, sir.

Q And the tunnel was extended on up to Well No. 6 about the same time -- 1897?

A 1897.

Q When was Well No. 6 bored?

A The same season.

Q Was that well also cut off into the tunnel?

A Yes, sir, after we reached there with the tunnel.

Q But when well No. 6 was originally bored, there was no tjnnel at that point?

A I think the well was bored before the tunnel reached the well,--probably some few months.

Q When the tunnel did reach Well No. 6, was that well also cut off, so as to discharge into the tunnel?

A Yes, sir.

Q Did either of those wells actually discharge any water into the tunnel?

A I think so. I know the measurements showed that we got a good deal more water. My memory is that they did, but I

have no record showing the amount each well discharged.

Q Do you know of any log of these wells or either of them?

A There was a log of those ~~xxlixxxxk~~ wells kept, but I have n't got it myself. It was introduced in the McPherson case.

Q Can you state from your own observation the character of material through which these wells passed?

A No, sir.

Q What was the next development?

Q You mean on the Lone Star system?

Q Yes, on the Lone Star system.

A The next development was made by Mr. Stowell when he purchased the 35-acre tract and commenced running what is now the Lone Star tunnel, the lower Lone Star Tunnel. That was in '99 that they began work.

Q Do you know about when it was completed?

A It was completed to the present well No.5 in 1904.

Q I mean the work that Stowell did?

A He completed as far as he went in about 1901, I should judge. I know he sold out in 1902.

Q Abouthow far did he go in 1902?

A He went very close, if not quite as far as Base line, and he bored the 5 or 6 wells around the 30-acre tract.

Q Previous to the running of that tunnel by Mr. Stowell, was there any natural outflow of water at or near the mouth of that tunnel which was taken into the tunnel?

A No, sir, it was right straight in the middle of Hellman Avenue -- on the east side.

Q What was the result of that tunnel as to producing any outflow of water?

A It produced no water till it passed into the 35-acre tract some distance, and then I think there was some water ~~began~~ began to come in a small amount, before we got to the wells. The wells were bored mostly first.

Q Then the tunnel ran so as to connect --

A The tunnels ran so as to connect with the wells. The wells are not on a regular line, and there is two or three branch tunnels running off to meet the different wells, but I think at that time nearly all the water came from the wells. There was very little in the gravels in the 35-acre tract.

Q Those wells were cut so as to connect with the tunnel, either directly or by branch tunnels?

A Yes, sir.

Q Are the wells which werebored at that time connected with the tunnel as thus constructed by Mr. Stowell, indicated i on plaintiff's exhibit 1?

A Yes, sir.

Q And those are located in what is designated as the 35-acre tract?

A Yes, sir.

Q I wish you would specify those wells so that we can know which they are.

A Shall I call off by letters?

Q If they are marked, state how they are designated.

A The first one I see here is marked "Well H" on a line with the tunnel, and the next one is "Well I," to the north and east, and does not seem to be marked on the map as connected with the tunnel, but there is a tunnel connected with it; and then there is Well F, which is also I believe con-

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nected with the tunnel by branch tunnel, and the Well G, and Well E (which is the well next to Base Line--the lowest well there is on that 35-acre tract), five wells marked there; that is all that I know about. There is also a Well K, on what is called the 65-acre tract, that Mr. Stowell put a shaft on, but, I believe, did not bore the well.

Q Did you have anything to do in any way yourself in the way of supervising that work?

A I think I ran all the lines for his tunnels, for Mr Stowell, I mean, at that time.

Q Now, the tunnel that was run by Mr Stowell up to Base Line, or about there, has been since extended: Do you know anything about that extension?

A Yes, sir.

Q When was that extension made?

A I couldn't tell you exact dates, except they were working on it all through the year 1904, and made the connection in 1904; I think I have some information in my note books that show about when it was made; in 1904, the connection was made with well number 5; they were a year and a half getting up there; it was very difficult.

Q What is the position of that extension of the lower tunnel, with reference to the upper tunnel?

A Why, it is very near beneath it; probably at no place - as far as it reaches up - at no place is it more than 20 or 30 feet from a perpendicular line, beneath the other tunnel.

Q And well number 5 penetrates down to both tunnels?

A Yes, sir; it is cut off now at the lower tunnel, at tunnel number 2 and ofcourse discharges all the water there; I don't know km whether they pulled the casing out or not between the two.

Q Is there any connection between tunnel number 1 and tunnel number 2, of the Lone Star system, except by means of that well shaft?

A Well, it is at that shaft, the only place of connection; I don't know just how they are connected; but the pipe is at that shaft; since that tunnel has been connected with well number 5, there has never been any water flowing out, of the tunnel number 1, by gravity; it has to be all pumped water.

Q At well number 5, what is the depth below the surface of tunnel number 1?

A I don't know as I could tell within one or two feet, but it is practically 141 feet;-- Oh no, it is 41 feet; there is about 100 feet difference between the two tunnels; about 41 feet to tunnel number 1; and about 100 feet further down to tunnel number 2.

Q How far beyond that does tunnel number 2 extend?

A That is the end of it.

Q Have you any measurements of the outflow of water, from either of those tunnels, other than those that have already been given in evidence?

A Yes, sir.

Q I wish you would give us those measurements.

A I have the measurements that I have, that have not been put in evidence, of all that we have of the older days, of the Lone Star system.

Q I should like all those measurements.

A I think they are not in evidence yet.

Mr McKinley, Q Are they measurements made by you?

A Nine out of every ten; I would like to read the evidence where they come from

Mr McKinley: We have not any objection to any measurements that the witness made.

A I will state that all the measurements of what we call the olden days, before 1900, were taken from my own measurements, as well as from the exhibits used in the MacPherson case; all these measurements were embodied in exhibit number 32 in this case, except we left off the Lone Star measurements, not considering they were necessary, at that time, when that was put in, two years ago.

Mr McKinley: I have no objection to the measurements made by the witness, at this time.

A I did not make them all.

Mr McKinley: We object to any measurements not made by the witness.

The Court: The objection is well taken.

Mr Goodcell, Q Give your own measurements in the first place.

A I will state right now, the first measurement I have, I think, in fact I don't know, was testified to by Mr J.C. Lynch, as being along with William Fitzhugh, when it was measured in 1885.

Mr. McKinley: Let us see the tabulation.

(Mr McKinley: examines tabulation)

Mr McKinley: We will make no objection to that.

The Court: Then it had better be put in in the usual way and let the reporter copy it into the record.

Mr McKinley: I withdraw the objection; I am willing that the tabulation should go in.

The Court: Have you any objection to it, Mr Britt?

Mr Britt: No, sir.

Mr Goodcell, Q Have you prepared a tabulation of the

measurements you have just referred to?

A Yes, sir.

Q Is this the tabulation?

A Yes, sir.

Mr Goodcell: I ask that this tabulation be copied into the record.

The Court: Let it be copied.

Q Are the measurements shown on this tabulation all the measurements that you have, that have not before been put in evidence, from the Lone Star?

A I don't think they are all the measurements, but they were picked out as annual measurements, about the nearest summer period of the year that we had to agree with the other measurements. We have a good many other measurements but most of them are in evidence in the other exhibits in the case.

The tabulation referred to by the witness is admitted in evidence, and is here extended into the record, as appears on the two succeeding pages, being

WATER FROM LONE STAR INVESTIGATIONS, NOT SHOWN
ON EXHIBIT 32.

Here the Court takes a recess until two o'clock p.m.

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CUCAMONGA WATER COMPANY, WATER FROM LONE STAR DEVELOPMENTS, NOT SHOWN ON EXHIBIT 32.

		Tunnel #1	Tunnel #2 Inches	
Sept. 26-85	Wm. Fitzhugh	2.03		
Nov. 30-86	J.P. Culver	2.02		
July 24-87	Fred Eaton	2.00		
July 13-88	J.P. Culver	13.59		Small tunnel built 1887
July 13-89	E.T. Wright	9.78		
July 14-90	E.T. Wright	10.85		
1891, 1892, 1893	No measurement.			
Sept. 15-94	E.T. Wright,	8.00		
June 12-95	E.T. Wright,	7.00		
Aug. 20-96	F. E. Trask,	7.00		Estimated
Aug. 10-97	F. E. Trask,	9.42		Extension of tunnel and wells 5 and 6 sunk
Aug. 3-98	H. W. Stowell,	47.00		
Apr. 1-99	Finkle & Newman	35.60		
Aug. 21-99	E.T. Wright, flow pumped flow	27.00 75.00		
Mar 2-00	E.T. Wright	18.28		
May 10-00	" pumping	58.10	41.96	
July 27-00	" "	54.21	25.81	
Aug. 24-00	"	7.69		
31-00	" pumping	59.03	47.45	
Sept. 26-00	" "	48.95		
Nov. 12-00	" "	36.71		

			Tunnel #1	Tunnel #2
			Inches	
Jan. 20-01	E.T. Wright		1.20	
Feb. 11-01	"		2.05	
May 29-01	"	pumping	30.04	
June 7-01	"	"	27.11	
July 9-01	"	"	42.12	47.45
July 23-01	"	"	49.87	49.10
Aug. 12-01	"	"	58.10	63.00
Sept. 13-01	"	"	56.51	68.26
Feb. 28-02	"			60.71
Mar. 7-02	"			64.93
Mar. 19-02	"			67.00

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Afternoon Session, 2 p. m.

Mr. Conner: I offer in evidence two other chains of title.

Said documents are admitted in evidence and marked respectively,

DEFENDANTS' EXHIBIT Z 21

DEFENDANTS' EXHIBIT Z 23

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E. T. WRIGHT.

E. T. Wright, previously sworn, recalled for further direct examination, testified as follows:

Mr. Goodcell: Q Have you made any recent measurements of water that are not yet in the record?

A I made some measurements day before yesterday, Sunday.

Q I wish you would give us those measurements.

A Weir No. 1, which is the water going to the Cucamonga Water Company from the Hady Tunnel, 66.20 inches; Weir No.2, which is the water going to ~~the Cucamonga Water Company~~ Ontario from the Hady Tunnel, 46.95 inches. Then on the east side there was China Cienegas that I have not measured for eight years, 3.95 inches. And from the Y Tunnel as measured at the division-box, 31.77. At Weir No.5, there was 32 inches flowing in the box; and in addition to that, there was an estimated amount in the creek of from 16 to 20 inches. The creek was estimated; the other was measured. There was 32 inches going overthe weir at Weir 5, at the 30-inch pipe line. I also took measurements of the elevations of water and at San Antonio well No.9 the water stood 1354.1.

Mr. Britt: Q Is that the same as well 14?

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A Yes, sir, the same as well 14; which is one or two feet higher than I have ever seen it before. At the Lone Star Tunnel on the east side, measured at what we call 7 B, at the Base Line, the shaft at the Base Line; the water stood there at an elevation of 1331.4. That was backed up some 40 odd feet by the bulkhead of the Lone Star Tunnel. In addition to that, I have three other measurements here, but they were taken by Mr. Cousins. He was along, and they were taken by him; three other measurements of elevations. He took them and he gave them to me, and I put them down, but I did not take them myself.

Q Any other measurements that you made of your own?

A I have no other measurement. I have down here the object of my going out there mostly, which was to get --

Mr. McKinley: We object to the object.

A Well, it is an elevation.

Q The object is not an elevation, is it. It may be a depression for us.

A I have the elevation then of the pipe, the casing of the Hellman Well No.2, in which there seemed to be some variation, from 6 inches to a foot and a half, by the different parties, by Mr. Cousins, Mr. Trask and myself. I simply got the exact elevation.

Mr. Goodcell: Q What did you determine as to that?

A I made it 1366.1.

Q That is the actual elevation of what?

A Of the top of the casing at Hellman Well No.2.

I also got the elevation of the weir at the mouth of the Y Tunnel as 1365.80; and the water is now flowing out a

foot and something below that, because it is running under the weir; it is not going over the weir.

Q Did you observe whether any water was flowing from the lower Lone Star Tunnel?

A There was none. I have one more measurement, which was from weir 5, which is the upper Lone Star Tunnel, 2.9 inches; but there was no pump running, and that was simply water running from there from the Formosa water flowing in there.

Q That was escaping from where?

A That was some small portion of the water that was turned in there of the Formosa water. I suppose it was let out for domestic purposes. I noticed that much flowing over Sunday, 2.9 inches.

Q The bulkhead then was tight?

A Yes, sir; that is, there was none appreciable -- it was considerably less than an inch, and it was too small to measure. I also measured by estimation -- I put it that way because I tried to measure it and couldn't make an accurate measurement of it -- the waters flowing from the east branch of the Y Tunnel at the mouth, and there was somewhere between two and three inches; I am willing to state that much; it was coming out of a pipe in a little stream that we didn't get any accurate measurement of.

Mr. McKinley: Q That is included in the Y Tunnel measurement that you gave?

A Yes, sir; but this was in the east branch of the Y Tunnel.

By Mr. Goodsell: Q Do you know how long water had been

flowing from the east branch of the Y Tunnel?

A No, sir.

Q Had you observed that east branch of the Y Tunnel any time shortly before that?

A I was down that way in 1908, when the water was flowing out of the Y Tunnel, and looked at it, and that is the only time I have been down until this last week.

Q I refer to the east branch of the Y Tunnel?

A I was down at the mouth; I have only been once at the head, and that was before any water flowed out at all; there was no water flowing there at all at the time I was down at the shaft.

Q Have you prepared a tabulation of measurements that have been introduced in evidence, so as to show the aggregate of water that has been taken on the east side, other than the water taken by the plaintiff?

A Yes, sir.

Q That is, other than water taken by the plaintiff and defendants, San Antonio Water Company and Ontario Power Company?

A Yes, sir, I have prepared that.

Q Have you that tabulation with you?

A I have it here with me.

Q State more fully what it is, and how it was compiled?

A It is headed "Water supplied from Cucamonga district except to San Antonio Water Company, Ontario Power Company, and Cucamonga Land and Irrigation Company". That should include the Cucamonga Fruit Land Company; but it rises on the Cucamonga Land and Irrigation Company's land. It does

not include any of the Cucamonga Vineyard Company's either; that is part of the same thing; that raises on the land of the Cucamonga Land and Irrigation Company. Then the headings of the columns are first the date. Column No.1 "Cucamonga Water Company from west side Red Hills", which means the Eady Tunnel," and "Cucamonga Water Company from the east side Red Hills including Class B, gravity flow."

Column No.3 reads, "Total to Cucamonga Water Company."

Column No.4 is Sunset Water Company pumped water.

Column No.5 Old Settlers' Water Company, including Cucamonga Creek water and pumped water.

Column No.6, Hermosa Water Company pumped water.

Column No.7, Upland Water Company pumped water. Then the next column is remarks. It starts back to the date of September 26th, 1885, at the date of the Fitzhugh measurement, which was introduced in Exhibit 32 here, and continues to date; and is supposed to be -- I will put it that way because I tried my best to do it -- to have nothing but what has been testified to in this case. I think it is all already testified to in this suit. The first fifteen years there is only about one measurement a year. Since 1904, I have tried to give monthly measurements at about an even space apart; and, as given in the remark column, according to the testimony, the amount of days and the amount of inches in separate columns, of the time as pumped by Upland, Sunset, Old Settlers and Hermosa Water Company.

Mr. Goodcell: We offer in evidence the tabulation.

Mr. McKinley; We object to the tabulation as incompetent and as being a repitition of the evidence already introduced,

and that it is by way of argument in selecting measurements. We are satisfied that it is simply argument. It could perhaps be introduced by plaintiffs in rebuttal, but not in this way, and we insist on the objection.

Mr. Goodcell: If the objection is insisted on, I don't know but what the objection is good. It is not original evidence.

Mr McKinley: I certainly insist on it.

The Court: The objection is sustained.

(The witness is temporarily withdrawn for the purpose of allowing Mr. Britt to call certain witnesses in rebuttal out of the regular order, which calling out of order is by permission of the court over the objection of Mr. McKinley.

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JAMES BIRCH.

James Birch, a witness heretofore sworn and examined, being recalled by plaintiffs in rebuttal, testified as follows:

Direct Examination.

Mr. Britt: Q Do you live in Ontario?

A Yes, sir.

Q Did you know a party by the name of George Klaffert?

A Yes, sir.

Q Do you remember the season when he was working for the San Antonio Water Company?

A I remember the season, but I can't give you the date exactly. It was '96 and '7 I think, but I am not positive.

Q Was it as long ago as 1897?

A I have made no note of it, and therefore I am not positive.

Q You worked for the San Antonio Water Company yourself about the same time?

A Yes, sir.

Q I will ask you if you know the San Antonio Water Company's well No. 3?

A Yes, sir.

Q You know the location of that well?

A Yes, sir.

Q And you remember that you were employed to do some work about that well in a certain summer season?

A Yes, sir.

Q Do you know whether that was the season that Mr. Klaffert was in the employ of the San Antonio Water Company.

A Yes, sir.

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Q What were you doing for the San Antonio Water Company in and about that well No. 3?

A I ran an engine for a short time there, and I done a good deal of other work. I changed the pipe line from the well -- it used to go straight south from the well to Sixteenth Street and then ran along Sixteenth Street, and it wouldn't carry the water, and Mr. Hanley, that is now manager,-- I believe he was manager then -- we surveyed it with a spirit level a and ran it on a regular grade to where we wanted it to go to, and it carried all the water all right.

Q The pipe line extended from Sixteenth Street well No.3 to where.

A To a point on Sixteenth Street, I think, about a half a mile west of No.3 well. It is all of half a mile.

Q Was it extended due west?

A No, it went in a diagonal form.

Q What was the matter with the pipe line?

A The pipe line was mis laid, and it went up and down too much, and it wouldn't carry the water. It wouldn't carry the water from one well; and after we straightened it and put it on a regular grade, it carried the water from three wells.

Q What did you do to mend the pipe line ?

A It was just with a common spirit level. We put it on a regular grade. It was steel drive pipe, and we laid it on a perfect grade all the way.

Q Was there any pumping of the well during the time you were re-laying the pipe?

A No, sir, not while we were laying the pipe.

Q What length of time was required or was occupied in relaying the pipe?

A I think aboutthree or four weeks. I ain't positive. You see, I worked for them a good deal, and I would be working at one thing now and another thing again -- anything that they put me at I was doing -- and I didn't keep time on any one particular job.

Q You say it was about a half a mile?

A Yes, sir.

Q What time in the year was it that you relaid that pipe line?

A It was after midsummer, but it was very warm weather at the time.

Q During that season did you run the engine at any time on Well No. 3?

A It was before this time considerable, because the pump I think was taken out that I run at that time. The pump was called the Wonder Pump, and it wasn't any account.

Q Was it during the same season?

A Yes, sir.

Q Before or after you relaid the pipe line?

A Before.

Q During the same season, but before you laid thepipe line?

A Yes, sir.

Q In the summer season.

A Early in the spring.

Q What sort of an engine was it?

A It was what they call a Perkins engine,-- a gas engine.

Q What length of time did you run that engine?

A I don't know positively, but I didn't run it a great while; probably two weeks was all the time I ran it.

Q During the time you were running the engine what was its condition, and how much time did you lose?

A It was an inferior engine, made by a man named Perkins, and nobody could make a success of running it. But afterwards Mr. Kalffert took out the cylinderhead, and put in a new cylinder-head, and it pumped better.

Q You were an engineer?

A Not then.

Q Did you run that engine any?

A No, sir; he was running it himself then.

Q I understood you to say that there was a time when you ran the Perkins engine?

A Yes, sir. This is the same engine. I sayx afterwards Mr. Kalffert ran it, and took out the cylinder-head and put in a new one.

Q During the time you were running it, what did you notice as to the extent of the interruptions that you suffered?

A I think it was interrupted a third or a fourth of the time any way. We were sinking the shaft, and they were making it larger, and the pump was running for that purpose more especially than anything else.

Q Sinking what shaft?

A No. 3. They were making it larger, and we had to keep the water out of the bottom of the shaft where they were working.

Q That was the year when No.3 well was being enlarged?

A Yes, sir, to the best of my knowledge. I am speaking of course to the best of my knowledge. I am not saying facts because I haven't the dates. I am doing the best I can.

Q I am not asking about dates, but for the time --

A You are asking me time, and that surely would consist of dates, but I don't wish to dictate.

Q I am asking you what happened. If the well was being enlarged at the time you had trouble with the engine?

A Yes, sir.

Q Do you know what season that was, relative to the season when the San Antonio Water Company began to pump the Haskell well -- the new Haskell well, after the well was made a deep well?

A That was considerably before that time, because the time they sunk the Haskell well they had a steam engine at No.3.

Q How long was it before the Haskell well had become a deep well?

A It was two years any way, I think, but I am not positive.

Q Was the enlargement of Well No.3 -- the deepening of that well, going on in the same season that the first Haskell well was being sunk?

A No, sir, unless they done it twice . The first time it wasn't. It was done before the Haskell well was touched at all.

Q Did this enlargement of Well No.3 occur during the season when George Klaffert was working for the San Antonio Water Company?

A Yes, he was working, but he was up at [illegible] Street, at

the time that was done.

Q What was he doing at 22nd Street?

A They put another engine up there and pumped on the well there.

Q Do you know what they call that street?

A I don't know any name for it except the 22nd Street well. It belonged to Col. Paul and Mr. Adams, I think, at one time.

Q What did Klaffert do about the Sixteenth Street well No. 3?

A Right at that time he wasn't doing anything, when he was up there.

Q During that season was he at work on well No.3?

A I rather think he put in the whole season at 22nd Street, but I am not positive.

Q I think you said he run an engine there awhile at Well No.3?

A Oh, he did, but it was before he put the engine up at the other place.

Q Was it the same season?

A I aint positive about that; I rather think it was the season before.

Q Was it the same season that you relaid the pipe?

A He might have worked some that season before we laid the pipe, but I am not positive.

Q You said something about Klaffert remodeling this Perkins engine.

A Yes, but that was after I had anything to do with the engine. I never saw the engine after that. I never worked

much around the shaft after that. I was over at the Haskell well.

Q Was it the same year or the same summer that you relaid the pipe line?

A I rather think not. I think it was before,-- the season before I laid the pipe line. I am not positive.

Mr. McKinley: Q How many seasons have you worked for the San Antonio Water Company?

A I don't know.

Q About how many?

A I have worked off and on a good deal, but no whole season at a time.

Q How many different years?

A Three or four different years.

Q And you knew Klaffert several years?

A No, he wasn't there several years; I knew him two years.

Q You are not able to fix the date when this work was done, of fixing this pipe line? You don't know what year that was?

A No, I can't say exactly.

Q You say you were taking the water from three wells at the time the pipe line was fixed?

A After it was fixed.

Q Had you, before the pipe line was fixed?

A No, sir; the wells wasn't pumped into that pipe line at all. The pipe line wouldn't carry the one well.

Q How soon after the pipe line was fixed, did that begin to carry water from three wells? A I think it was the following season.

Q What well was it? A Now called No.1, 2 and 3.

L. RABE.

L. Rabe, a witness produced by plaintiffs in rebuttal, being first duly sworn, testified as follows:

Direct Examination.

Mr. Britt: Q You live at Ontario?

A Yes, sir.

Q Several years ago were you in the employ of the San Antonio Water Company to run an engine at some of its Sixteenth Street wells?

A No, not several years ago.

Q When was it?

A About six or seven years ago.

Q Do you know what year it was?

A When I was running -- I suppose in -- I don't know just exactly; I suppose in '99. That is about the year I helped out there.

Q Do you know the last witness, James Birch?

A Yes, sir.

Q Do you know one George Klaffert.

A Yes, sir.

Q Was Mr. Klaffert at work in or about Sixteenth Street well No.3 when you were working there?

A Yes, sir.

Q What time of the year were you there?

A I can't state exactly.

Q Was it warm weather or cold?

A It was pretty warm weather.

Q What were you engaged in?

A In putting down pumps and digging wells and so forth.

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SUPERIOR COURT

Q Which wells?

A We were enlarging the well at No. 1 -- what we call the No.1 Well.

Q Do you know the situation of the San Antonio Water Company's present well No.3?

A Yes, sir.

Q Was that the well?

A That is what they changed the number to No.3. I suppose that is the same well.

Q Do you know the well which ix has beside it the eucalyptus trees?

A Yes, sir.

Q What was the well?

A Yes, sir, that was the well.

Q What were you engaged in on that well?

A I was engaged in handling the dirt.

Q Out of the well?

A Out of the well.

Q What for? For boring the well or --

A For enlarging the well.

Q Enlarging the drilled well or the shaft, or what part?

A The shaft.

Q Did you have anything to do with the placing of the pipe line from that well to a connection with the main pipe?

A Yes.

Q Whom did you work with?

A My brother.

Q What was done with the pipe line?

A Taken out and putting back a steel pipe.

Q Was there any pumping carried on during that time?

A No, sir, not at all.

Q How much time was occupied?

A I couldn't really state that; somewhere around three or four weeks I suppose.

Q Did you run an engine at any time that season for pumping that well?

A I did, a few nights for Mr. Klaffert.

Q George Klaffert?

A Yes, sir.

Q What sort of an engine was it; do you remember the make?

A Yes; a Perkins engine.

Q Were there any interruptions in the operation of the machinery?

A Yes, sir; more or less all the time. There was hardly a minute that I would stay away but what it would stand still. I had to be monkeying with it all the time.

Q How long did that condition of affairs continue?

A I quit running the pump. I didn't want to bother myself with it, and I quit pumping.

Q How much time did it lose while you were endeavoring to operate it?

A Something like half the time.

Cross Examination.

Mr. McKinley: Q Is this the only time you ever worked for the San Antonio Water Company?

A No, sir.

Q How many years did you work for them?

A Three or four years more or less.

J. BENJAMIN
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SUPERIOR COURT

Q Was this the first time you ever worked for them?

A No, it wasn't the first year I worked for them. I can't just remember what -- I worked for them more or less after that.

Q How many years before that did you work there?

A I can't just exactly state.

Q What had you ever worked at for the San Antonio Water Company before you took up this work?

A I worked with Bob Manley. Bob Manley was the boss, and I was instructed from him what to do.

Q Various works around the system?

A Yes, sir.

Q How long were you at Well No.3?

A I can't exactly statek; I haven't got the record here.

Q About how long?

A I can't exactly state how long I worked there.

Q Did you work there six months?

A No; may be three or four weeks, or something like that.

Q Did you ever work there more than four weeks?

A I don't think so.

Q Did you work more than three weeks?

A Yes, sir, I think so.

Q You don't remember what month it was?

A No, I do not.

Q How do you fix the year? How do you know what year it was?

A I recollect the year when Klaffert was working there, the last year when Klaffert was working there. It was that year.

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SUPERIOR COURT

Q You didn't work there another year?

A Not on that well.

Q How do you know Clafford didn't work there?

A He told me he was going away.

Q Do you know he did go away?

A Yes, I do.

Q What year did he go away?

A He told me he was going - -

Q Not what he told you: What do you know about his going away? What year did you last see Clafford?

A In 1899.

Q What time?

A The latter part of the year.

Q How do you know it was in 1899?

A Well, that is when I worked there.

Q Have you anything to fix the dates by?

A I have the books home.

Q Have you looked at them in the last day or two?

A No, I haven't looked at them lately, no.

Q You say they did work on the pipe line while you were there?

A Yes, sir.

Q Where did that pipe line run to?

A It ran from the 10th street well down to where it connected with the cement pipe.

Q Was it connected with any other wells than Number 3?

A No, not at that time.

Q Had the company any other wells over there at that time?

A Yes, sir.

Q Where?

A At Haskell's and so forth.

Q How long had they had the Haskell wells then?

A I don't know exactly how long.

Q Two or three years?

A I remember working there but I can't say exactly.

Q How long before working at well number 3 did you work at the Haskell well?

A I couldn't state.

Q Was it before or after you worked at the Haskell well that you worked at well number 3?

A It was before.

Q As much as a year before?

A Somewhere along there.

Q As much as two years before?

A I couldn't state just exactly.

Q Are you an engineer?

A No, sir.

Q How many nights did you run the engine?

A About three nights.

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JAMES C. JONES.

James C. Jones, a witness called by plaintiff in rebuttal being first duly sworn, testified as follows:

Direct Examination.

Mr Britt, Q Where do you live?

A Atimenca.

Q How long have you lived there?

A Since 1894.

Q And engaged in what business?

A Ranching.

Q What species of ranching? What branch of the ranching business?

A Orange, lemon and vineyard.

Q Do you know the vineyard called the Cucamonga Vineyard?

A Yes, sir.

Q You have a vineyard at Etiwanda?

A Yes, sir.

Q How far from the Cucamonga Vineyard?

A About five miles.

Q How long have you been engaged in the vineyard business?

A Practically all the time that I have been at Etiwanda.

Q How much vineyard do you farm?

A Is that what I take care of besides my own or just my own?

Q All that is under your supervision?

A About 220 acres.

Q Of that you own how much?

A 24 acres. and I have a half interest in [illegible] acres.

Q Have you observed the difference in the production of irrigated vineyards and non-irrigated vineyards in that neighborhood?

Mr McKinley; objected to as incompetent; and particularly incompetent to show the observation of an individual, of a particular vineyard, particularly not in the neighborhood in question here. The plaintiff in the opening introduced evidence in regard to the vineyard, by Mr Summers, in regard to the condition of the vineyard, when it was irrigated, and the result to the vineyard when it was not irrigated; also

the testimony of Mr Haven, who testified in regard to his vineyard; and we submit that for both of these reasons the testimony is not in rebuttal and is not admissible.

Mr Britt: I would like to ask the witness one other question before the Court rules upon this: How does your vineyard and the other vineyard under your charge, compare as to quality and general nature of the soil, with the soil of the Cucamonga Vineyard?

Mr McKinley: Objected to on the same grounds.

Mr Britt: We insist that it is proper and competent rebuttal; they have introduced evidence here upon the subject of the requirements of vineyard for water, and an effort has been systematically made to prove that a vineyard is a great deal better off without any water; and that is a subject which the plaintiffs did not go into, in their case in chief.

Mr McKinley: I will restate the objection: Defendant objects to the question, and to both of them, there are two pending, upon the ground that the testimony is incompetent; that it is incompetent to show specifically the effect upon particular vineyards, with regard to the use of water, other than by expert opinion as to the beneficial use of water for vineyards; and on the ground also, because it is undertaking to show a conditions of vineyards in another neighborhood than the one in question; and also we object further to the questions, because they are not in rebuttal, the matter having been gone into by the plaintiffs in their opening case.

The Court: No doubt the plaintiffs did offer evidence as to the requirement for water in the care of their vineyards

in their opening case; I am inclined to think, however, it is in rebuttal of the expert evidence of the defendants on that subject, not so much as bearing directly upon any particular vineyard, but upon vineyards in general, where the conditions are generally about the same.

Mr Britt: These questions were directed to that proposition.

The Court: I thought from the nature of the objection that you were asking him about some particular vineyard.

Mr Britt: The question asks for vineyards in that neighborhood.

(Last question objected to read.)

The Court: I think you should be permitted to show the similarity of conditions as far as you can. The objection is overruled to the last question.

Mr McKinley: Exception.

A The nature of the soil is very similar.

All the vines that I have charge of are Muscat vines, and raisin grapes; the vines on the Cucamonga Vineyard are a raisin grape. Q. All of them? A. All that I know of.

Q You are acquainted with the situation of the country there in which your vineyards are situated, and in which the Cucamonga Vineyard is situated?

A Yes, sir.

Q You know about how it is located with reference to the mountain range?

A Yes, sir.

Mr McKinley: I suppose it is understood that all these questions are subject to the same objection?

The Court: Yes, sir.

Q And you have lived there since 1884, you say?

A Yes, sir.

Q What have you observed as to the rainfall about the Cucamonga Vineyard and where your vineyard is situated? Do you observwe any material difference in the rainfall?

A No, sir.

Q What do you observe in that regard? When it rains in one place that it rains at the other?

A Pretty generally.

Q Have you noticed both irrigated and non-irrigated vineyards ,- observed them in those communities, at Cucamonga and Etiwanda?

A Yes, sir.

Q Now, I will renew the question first put and ask the reporter to read it.

(Question read by reporter: "Have you observed the difference in the production of irrigated vineyards and non-irrigated vineyards in that neighborhood?")

Mr McKinley: I now renew the objection.

The Court: I think that is tantamount to a question whether in the opinion of the witness vineyards require irrigation; the objection is overruled.

Mr McKinley: Exception.

A Does that mean in the Cucamonga District?

Q In both districts?

A Well, I haven't had any personal experience with the yield,-how they compare in yield, is it?

Q Whether you have observed the difference of production or observed the productiveness of irrigated and non-

irrigated vineyards in that part of the country?

A In the Muscat vineyard - -

Mr McKinley: That is a question whether he has observed it.

Mr Britt: Yes, sir.

Q This is whether you have observed it?

A Yes, sir; I answer that I have.

Q Now, I will inquire of you your opinion as to whether in that vicinity irrigation is beneficial in the raising of vineyards, yard, and for the production of grapes for the purposes of profit?

Mr McKinley: Objected to on the ground that it is not in rebuttal; and also on the ground that not sufficient foundation has been laid for it, and it is not limited to thecharacter of vineyard in question here, which seems to be of wine grapes.

The Court, Q Do you know whether there is any difference in regard to raisin and wine grapes, in regard to the advisability of using water?

A Yes, sir; I think it would be a benefit in both cases.

Mr McKinley: I move to strike out the answer on the ground that it is not responsive to the question.

The Court: That will be stricken out.

Q Have you had any experience in the two kinds of grapes, yourself, as to whether they require the same treatment and cultivation?

A Practically the same.

Mr McKinley: I move that that answer be stricken out as not responsive to the question.

The Court: Stricken out/ .

Q Have you had any observation and experience in regard to wine grapes at all? I understand you have had in regard to raisin grapes; have you had any experience in regard to the other?

A Only just from seeing the vineyard; I never had any personal care of them; I have observed them; yes, sir.

Q Have you observed them and studied the question as to whether or not they require the same conditions as to cultivation and irrigation?

A No, sir.

Mr Britt: Q Do you sell any grapes to the wineries?

A Yes, sir.

Q What proportion of your entire holdings, or your entire area of which you have charge?

A About one-half; about forty percent.

Q You are raising grapes for wine, as well as for raisins?

A Yes, sir; they are raised for brandy; I don't know as it makes any difference.

The Court, Q Do you know what is the requisite in raisin grapes - what quality in the grapes is most esteemed?

A Sugar and saccharine matter and the size.

Q What is the requisite in the grapes where they are used for wine and brandy?

A Saccharine, then.

Q The same thing?

A Saccharine, but the size don't count.

Q In other respects the requirements are the same?

A Yes, sir.

The Court: The objection will be overruled:

Mr McKinley; exception.

The Court: The question will go xxxx to the weight of the evidence, rather than its admissibility.

(Question read to witness as follows: "Now, I will inquire of you your opinion as to whether in that vicinity irrigation is beneficial in the raising of vineyards, and for the production of grapes for the purposes of profit?")

A Yes, sir.

Q What is your opinion?

A Yes, sir.

Q For what reason are you of that opinion?

A I think you get a greater tonnage, and in all vines, you x have to grow your wood one year to get your crop off the next; when we have a heavy rainfall we don't irrigate till summer time; when we have a slight rainfall, we irrigate sometimes every month in the year; if we have plenty rain we think the vines will make a good strong growth, and there will be good wood for the coming crop, and we don't irrigate until the summer.

The Court, Q Don't you get the crops each year off the new growth?

A Yes, sir; but we have to grow that wood this year for the crop next year.

Q I supposed you pruned off down to the stock; I supposed it was the new growth that the grapes grew on.

A You leave a certain number of spurs for the new wood.

Q The new wood grows out of those spurs?

A Yes, sir; that is the fruit wood for the next year.

Mr Britt, Q For the production of wine grapes - grapes designed for manufacture into wine, is the size of the grape any factor in the tonnage that you get from an acre?

A Yes, sir.

Q What figure does it cut?

Q Why in and around Etiwanda, we figure the dried grapes will average about five tons to the acre, from irrigated vineyards about eight tons to the acre.

Mr McKinley: We move to strike out the answer as not responsive to the question.

The Court: I think the answer is not responsive and should be stricken out.

Q The question was about the influence of larger berries, larger grapes, on the total tonnage per acre,- whether you get a greater tonnage of grapes, when your individual berries are larger? Is that so?

A Yes, sir.

Q And to what extent in your opinion does the irrigation influence the tonnage, as compared with non-irrigation?

A I think practically half.

Q Practically more or less in the case of irrigated ground?

A I am inclined to think there would be more than less.

Q You are speaking of the half?

A Yes, sir; increased a half.

The Court, Q Do you mean there would be more than double when you are irrigating?

A No, sir; I mean it would be a half more; if the vines make two tons without irrigation, they would make three with it.

Mr Britt. Q Do you mean it would pretty nearly double the weight of grapes produced, by irrigation?

A No, sir; not double; it would increase it about a half.

Q Have all of the grapes which you have sold for the purpose of manufacture into wine or brandy, been devoted to either product - either wine or brandy?

Mr McKinley: Objected to as irrelevant, immaterial and incompetent.

The Court: Sustained.

Mr Britt: Exception.

Q You have cultivated and sold grapes for both raisin purposes and for some other purposes?

A Yes, sir.

Q Have you produced the grapes for wine or for brandy, or for both purposes, or for either, at the will of the person who manufactures them?

Mr McKinley: Objected to as irrelevant, immaterial and incompetent.

The Court: Do you mean according to prescription, previous orders?

Mr Britt: No; the witness said something about selling raisin grapes for brandy purposes; I am disposed to think that he raises grapes and sells them, for both wine and brandy.

The Court: I think he said that.

Q Do you sell grapes only for brandy?

A No, sir; they go for both purposes.

Q Both wine and brandy?

A Yes, sir.

Cross Examination

Mr McKinley Q In selling grapes for wine or brandy, do you sell by tonnage, or is there a test made by the wineries as to the quality ?

A There is a test made, a saccharine test.

Q Are all the grapes on these places that you own and have the care of irrigated?

A No, sir.

Q How large a proportion is not irrigated?

A There is one hundred acres that is not irrigated.

Q State whether it is possible to carry on that vineyard at a profit?

A Yes, sir.

Q What variety of grapes have you sold for wine and brandy purposes?

A Muscats and a few black grapes.

Q What kind of black grapes?

A Zinfandel.

Q How much acreage of zinfandel?

A About 15 acres.

Q The muscat is a raisin grape used for wine purposes.

A Yes, sir.

Q Have your Zinfandel grapes been irrigated?

A No, sir.

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ARNOLD BALCH

Arnold Balch, previously sworn, being recalled by plaintiffs in rebuttal, testified as follows:

Direct Examination.

Mr Britt, Q You know where the mouth of the Cucamonga Canyon is?

A Yes, sir.

Q Have you noticed the flow of water from the Cucamonga Canyon, and down to the Cucamonga Creek, and on the land of the Cucamonga Land and Irrigation Company?

Mr McKinley: Objected to as not in rebuttal.

Mr Britt: This is merely preliminary.

A I have.

Q Have you noticed it at any time the last few years immediately after storms?

A I have watched it very close at one time.

Q Did you go down with Mr Cousins?

A Yes, sir.

Q What did you notice, with respect to the distance from the mouth of the canyon that the water ran, towards 16th street, before it sank in the ground,- what observation did you make in that particular?

A I have noticed a large stream of water disappearing within a short distance - a very large stream.

Q Within a short distance from where?

A From the mouth of the canyon, down to just below 19th street.

Q Just below 19th street?

A Yes, sir.

Q Was any of it running as far as 16th street, Base Line?

A No, sir; not a drop.

Q Where did it disappear? In the air or the ground?

A It ran in the ground.

Q Who was with you at that time?

A Mr Cousins.

Q Had there been any storm, any rainstorm previously?

A There had been a storm just before that.

Q What sort of a storm, heavy or light?

A Very heavy storm indeed.

Q Did you follow the stream from the canyon down to 19th street?

A I followed the stream up.

Q You went up from 19th street?

A Yes, sir; I went up from Base Line.

Q When was that?

A This was on April first, 1906.

Q Did you ever go over the ground for a similar purpose any other time?

A Well, I have gone up on March 31, and on March 28.

Q What year?

A The same year.

Q What did you find then?

A Well, on March 26, 1906, I was informed by Frank Ames, that the San Antonio Water Company and the roadmaster were turning storm water into the Cucamonga wash; and on March 28 I went to investigate the matter by myself, and found that there were several levees built on several different places to turn the storm water into said wash; and I owned a piece of land below at that time, and all the water was turned

on to me, and I therefore made an investigation and I called on Mr Cousins at my own expense, and I paid him myself; I wanted him to see the work that the parties have done up there.

Q. But you didn't go up to the canyon then?

A. Well, just to the mouth of the canyon, and on the 31st Mr Cousins and I, I remember well, we went as far as Base Line, followed the wash through there, and on the following day, April first, we started from the Base Line, up to the mouth of the canyon, and we walked all the way up in the wash; and at Base Line everything was dry; there wasn't a drop of water there; and a long ways up, pretty near up to 19th street, was perfectly dry; and when we got pretty near to the mouth of the canyon, we wanted to cross the wash, and I saw two large boulders in the wash, a distance apart,- because I know that I can jump over three feet, and I couldn't make it over those two boulders, to get on the other side of the water; and it was fully a foot deep for fully eight feet, and then it sloped off.

Q. Do you know the well on the Cucamonga Land and Irrigation Company's land, called the China well?

A. Well, I know a well that parties have been calling the China well; that is it has been called that way; of course I don't know the name of it.

Q. Where is it situated with reference to the Y tunnel? which side of the Y tunnel?

A. I don't know where the Y tunnel is located; I know there is some tunnels in there, but I haven't got the names of them, but I can give you the location on the map where

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that well is that I refer to.

Q Look at Plaintiff's Exhibit 1: You notice the location of the hotel.

A This is the base line; this is this straight road.

Q Do you notice the location on this map of the well which you say is the China well?

Mr McKinley: Objected to as not in rebuttal.

Mr Britt: The Court will remember that there was a contention made that the plaintiffs should pump the China well; we want to show by this witness that the China well was dry in 1903 when he went on the ground.

A In 1904.

Mr McKinley: There was not anything in our testimony in that regard about the China well; there was never any testimony introduced about the existence of any water in the China well; our evidence was addressed to the wells in the Y tunnel; we disclaim any theory that the plaintiffs ought to pump the China well. We don't make any point about there being any China well there that could be pumped.

Mr Britt: If they claim there is land there which could be pumped, and furnish a supply of water, then it is competent to show what became of the well which was actually on the ground.

The Court: Do you mean to say that it is your purpose to show that pumping on that land would be an idle act.

Mr Britt: It is our purpose to show that there was a well there and that it dried up.

The Court: Do you propose to show that this well, or any other well there on that land would produce no water?

Mr Britt: Yes, sir.

The Court: If you can do that, that would be proper rebuttal.

Q Do you find the well I called your attention to on this map?

A Yes, sir; that is the well.

Q How is it marked on the map Plaintiffs' Exhibit 1?

A Well, D 1899, Pump Pl. 1412.

Q Did you notice that hole in the ground when you went to the place?

A Yes, sir.

Q In what year?

A 1904.

Q What was its condition then?

Mr McKinley: Objected to as not in rebuttal, and going into their case in chief.

We admit that the pumping of this well in its present condition would be an idle act.

The Court: I understand the plaintiffs intend to go further and show that the pumping of others would be an idle act.

Mr Britt: If pumping in that locality would be an idle act, it would be argumentative as to the conditions about it; I think I am content with the admission last made by Judge McKinley. Does that extend to the year 1904 when the witness observed it?

Mr McKinley: I don't know what its condition was then.

Mr Britt: Then I renew the question.

Q What was the condition of that well in 1904?

Mr McKinley: Objected to as not in rebuttal.

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The Court: Sustained.

Mr Britt: Exception.

Mr Britt: The plaintiffs offer to show that the well to which the witness's attention has been directed and which he has last mentioned was in the year 1904 a dry well; for the purpose of showing that pumping would at that time have been ineffective in that well, and in the territory adjacent to it.

Mr McKinley: Objected to as not in rebuttal.

The Court: Sustained; it seems to me that the statement of Judge McKinley, what they concede, would practically dispose of the whole matter.

Mr Britt: The well at this time might be filled up; Judge McKinley's admission was that pumping it now would be ineffective in its present condition.

I understand the well is now almost filled up, so an admission as to the ineffectiveness of pumping it at the present time would amount to very little; I want to show that in 1904 that well was dry.

The Court: The ruling will be reversed; the objection will be overruled.

Mr McKinley: Exception.

A That well was dry in 1904 when I looked at the well.

Q What time in the year was it?

A It was somewheres in July.

Mr Haskell, Q On April 1, 1906, when you followed up the Cucamonga Creek, to near the mouth of the Canyon, in what channel did you find the water flowing? the east channel, middle channel, or - -

A The east channel.

Q Entirely in the east channel?

A In the east channel; yes, sir.

Q Any water being at that time spread out or diverted by anybody?

A It was just turned in.

Q It was all turned in the east channel?

A Yes, sir.

The Court, Q Turned in where?

A Turned into the wash.

Q To the east channel you mean?

A To the east channel.

xxxxxxxinex Mr Haskell, Q That east channel is the channel that comes down through the [illegible] Springs is it?

Mr McKinley: Is this evidence offered as rebuttal on the part of the intervenors?

Mr Haskell: Yes, sir.

Mr McKinley: Then I object to this question as leading.

Q Have you had any experience in measuring water?

A No, sir; I have had no experience in measuring water.

Q At this point where you say you crossed it was the water running swiftly or not?

A The water was running swiftly.

Q Was it running as swift as a man would ordinarily walk?

Mr McKinley: Objected to as leading and repetition, indefinite and uncertain.

The Court: Sustained.

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E.T. WRIGHT

E. T. WRIGHT, previously sworn, being recalled by defendant Cucamonga Water Company, testified as follows:

Direct Examination.

Mr Goodcell, Q I call your attention to Defendants' Exhibit O now placed on the board, purporting to show the relations existing between the Y tunnel, Cucamonga Springs, and the pumping of the Lone Star well number 9 of the Cucamonga Water Company: Have you examined that exhibit ?

A Yes, sir.

Q I will ask you what elements or factors are lacking in that exhibit, if any, necessary to a proper comparison, between the pumping of the Lone Star well and the flow of water from the Y tunnel and weir number 6?

A Why, there is this lacking: It does not give the amount of water pumped from the Lone Star tunnel. Another thing, it is made graphically to show them, and it does not show the relative amount of water pumped from the Lone Star tunnel, or the amount of discharge from the Y tunnel, or the amount of discharge from the Springs, relatively with each other; and also it does not show two other elements in the case, the flow of water from the Sadie tunnel, and the pumping from the 16th street wells.

The Court: I don't believe I quite follow you, Mr Wright. You say the measurements are not given?

A The measurements of water are given from the Y tunnel but they are not given of the pumping; then they are not relative with each other; there is 6-42 here and 6-49 there; they are starting on a different scale and not in proportion.

It does not show it graphically.

The Court, Q You think there is a sympathy between the east side wells and the Eadie tunnel?

A Well, I know it.

Q How do you know it?

A From the figures in the case

Q You are not willing to say it is your opinion, but you actually know it?

A I think so.

Mr Goodcell, Q Have you prepared a diagram, which includes for the purposes of comparison, the elements that are lacking in Exhibit O?

A I have.

Q Have you that diagram with you?

A Yes, sir.

Q Place it on the board please. Please explain to the Court what that diagram represents? You may state in the first place from what data it is compiled?

A The data is all compiled from testimony in the case, undisputed as far as that is concerned; measurements of water and times of beginning of pumping and so on. The diagram is entitled "Profile showing relations existing between water flowing from I tunnel, Cucamonga Creek and Eady tunnel (or No. 2) and water pumped from Lone Star well number 3 of the Cucamonga Water Company and 16th street wells of San Antonio Water Company."

It shows first on the lower line, the dates of commencing to flow of the I tunnel in 1906, and shows it graphically in proportion with each other, and the inches of flow each

time, until it runs out September 6, 1908; that is the lower green line, marked flow of the Y tunnel; the other green line is marked Flow from the Cucamonga Springs. The next line, mixed up with these two is pumped water from the Lone Star tunnel. The date they began pumping, and the amounts they were pumping proportionately shown, as well as figures written between those two dates, showing they pumped somewhere between 30 and 40 inches of water; and sometime in the middle of June, is the date of commencing pumping the 16th street wells; they started out with 190 and some odd inches.

Q That is the aggregate of the wells?

A Yes, sir; total pumping; they started pumping 129 inches; for some 30 days, and then they pumped 219 inches, and then fell to 190; and then up to 242, 271, and then dropped down to 203, and continue 203 until the Y tunnel is given out; they lowered the supply so that no more can flow. At the same time the Sadie tunnel, was furnishing the water as shown by this line, between 300 and 400 inches of water flowing out of the tunnel, at about the time the Y tunnel began to run out a - and practically held this along until the pumping of the 16th street well began, and the increased flow from the Sadie tunnel started . I don't want to be understood as saying that I think the Lone Star tunnel pumping had no effect, because I don't want to be understood that way; it had the effect in proportion to the amount of water pumped by that, and by the 16th street wells. The best proof of that is shown in the other years when the wells were not pumped, and that the water did not go down in the Y tunnel

was being pumped all through the season.

The Court, Q In this date column you have some of the dates in red ink and some in black: is there any design in that at all?

A No, sir; nothing at all, only to make them plainer; I suppose the draughtsman did that; it was not intentional.

Mr Goodcell, Q In that diagram are the different lines to which you have referred as graphically representing the quantities of water from different sources presented upon the diagram on the same scale?

A They are relative with each other; yes, sir, showing the large amount from the Eadie tunnel and the 10th street wells compared with the other sources.

Q What do the figures on the right hand and also on the left hand indicate?

A Miners' inches; the 0 on the bottom.

Q And those lines are drawn so that the height of the line above the bottom of the map is in proportion to the quantity of water?

A Yes, sir. I should also state that there is a small supplemental map that was put in to show the elevation of the wells, as the different wells were called for; the first one being elevation of San Antonio number 3; the next of San Antonio number 9 or plaintiffs' number 14; next San Antonio number 7; Hellman well number 2, and the Lone Star number 6; the elevation of the water at the same dates that we had measurements for comparing them, that we could ascertain from the testimony.

Q Did you design the tabulation as to the wells should

have any relation to the other portion of the diagram?

A Only as you could place them together by deduction.

Q When you speak of the elevations being shown of the wells, on that diagram, what do you mean?

A The elevation of the water in the wells.

Q And the elevation of the water in the wells taken at what times, as compared with the measurements shown on the other part of the diagram?

A The dates of the elevation of the water in the wells are all given here; we have some elevations - May 11th, 1908, practically only one elevation that will regulate the time of this flow, so it is not directly connected with the flow, with the other part of the map; it is simply to show the connection in elevation of water between the Hellman well, and the Lone Star well, and the three San Antonio Company wells; the red lines are drawn to conform to the same date; when there is a red line drawn from one well to the other, it is drawn from measurements of the same date; also on that map, there is Lone Star number 5, which is down in the tunnel, the lower Lone Star tunnel.

Q At that time was the water in well number 5 flowing up into the tunnel or was it standing below the level of the tunnel?

A I have no way of telling, I presume it was flowing into the tunnel; that is one of their main sources of supply , well number 5 of the lower tunnel.

Q Would the red mark as to that well represent the normal elevation of the water at that time?

A No, sir; because that is always affected by the bulkhead

except when it is run out, in August and September, when they have emptied it; any time before that time it is affected by the bulkhead and is higher.

Q The diagram as to well number 5 of the Lone Star, simply shows the elevation at which the water actually was at that time, and not the elevation at which the water would stand, if the pipe was closed, so that it would not flow into the tunnel?

A It certainly don't show the elevation if it was closed, because that has been unknown for some years. It shows the elevation of the water in the tunnel, at the head of the lower tunnel, where it is, at well number 5..

Q What is the elevation of water standing in the tunnel?

A Yes, sir; when it is bulkheaded.

Q Was the bulkhead in place at that time?

A Oh yes; the bulkhead has been in place since 1903.

Q What deductions or conclusions do you draw from the facts as indicated on that diagram?

A I don't know as I can state any more than I did state: simply that the Y tunnel giving out was caused by the pumping of the 16th street wells, the Lone Star well, and the flow from the Sadie tunnel, probably about in proportion to the amount of water shown, which was a small portion of that water taken from the Lone Star well.

Mr Goodcell: We offer in evidence the profile referred to by the witness.

Said profile is admitted in evidence, and marked

DEFENDANT'S EXHIBIT 224,

being diagram showing relation between Y tunnel, Sadie tunnel,

Lone Star well, and 10th street wells, (Bright.)

Q In answer to a question by the Court you said a few minutes ago that the taking of water from the Sadie tunnel, has an effect upon the flow of the Cucamonga Springs and the Y tunnel: Upon what do you base that conclusion?

The Court: It was not a conclusion; I asked him if he knew it and he said he did; it was not an opinion.

Q Upon what do you base that conclusion, if a conclusion, and how do you know it, if it is something that you know?

A I know it from the effect that it has on the 10th street wells extending clear to the east, and the connection and sympathy between all the wells, and the Hellman well number 2, and also the Springs giving out at about the same time; I know it has an effect on the 10th street wells, simply from the data put in here, the elevation of the wells going up and down; bulkheading the tunnel made the wells go up quite fast; when the wells were not pumped the tunnel flows more.

Q Do you mean the 10th street wells not pumped?

A When the 10th street wells are not pumped the Sadie tunnel will flow more than when they are pumped.

Q Does that imply or do you mean it to imply that in your judgment there is a sympathy between the 10th street wells and the Sadie tunnel?

A It does; yes, sir.

Q Upon what do you base that conclusion?

A I base that on the flow of the tunnel- You leave those wells unpumped - leave them a year without pumping, and the flow of the tunnel increases over what it was in the years

when they were pumped; and that as the wells rise the flow of the tunnel increases, when it gets more pressure to force it out of the tunnel.

Q Passing now from those wells to the more easterly wells, take the wells of the Cucamonga Water Company on the 30 acre tract, and the tunnels: Are you able to express an opinion as to whether the discharge of water from those sources affects the flow from the Y tunnel and the Cucamonga Springs?

A I don't think they do.

Q Upon what do you base that opinion?

A Because their level and their water-plane, on the Sunset wells and well X, and all the wells on the 30 acre tract, is 50 to 60 or 70 feet below the level of the Lone Star well number 6, or the Y tunnel well; and it has been that way for years and years, without apparently drawing the Lone Star well number 6 down to it at all, or affecting the flow from the Y tunnel; it don't seem to have any effect on them; and the wells to the north are high enough to flow water which comes out the Y tunnel; it don't seem to have any effect on the east side, because they are 50 or 60 or 70 feet below the mouth of it.

Q Have you observed any sympathy between the wells and tunnels on the 30 acre tract, and the Eadie tunnel?

A No, sir; I don't think so; I xx don't know of any.

Q Have you observed the character of the formation of the ground, lying between the 30-acre tract, and the Cucamonga Springs and Y tunnel, as to its affording any facility, or any barrier as to the free communication of water between those two sources?

A Why, there is a hill and a ridge there that looks as if it was the same sort of a barrier east and west, as the one between the Cucamonga Springs and the Sadie tunnel; and it extends further north, evidently; from the levels of the wells numbers xxxxxxx 6 and 5, of the Cucamonga Water Company, it must run somewhere near between those two,- the dike or formation, that does not allow free passage of water at least.

The Court, Q Do you mean there is a north and south dike there?

A To a certain extent there must be from the elevation they stand at year in and year out.

Q What is there on the surface of the ground to indicate the existence of the dike?

A There is a ridge there that you can see from that hill, running a little east of northerly; but it runs out as far as surface indications are concerned, about two or three thousand feet from the Base Line; you don't seem to see on the surface much more of it.

Cross Examination.

Mr. Britt: Q Mr. Wright, do you express the view that the Sunset well and the Hermosa well and the well E and possibly one or two other wells easterly of the ridge which separates the depression where those wells are situated from the Y Tunnel and the Cucamonga Springs, are at a different plane or different elevation, 50 or 60 or 70 feet lower than the elevation of the water in the Y Tunnel or the Hellman well no. 2, or the 16th Street wells of the San Antonio Water Company?

A Yes; the Hermosa well, being so far north on the plane, is not so much lower as the others.

Q Are you able to point out the measurements or other data on which this statement is founded?

A Yes, sir.

Mr. McKinley: Objected to as calling for a repetition of the testimony. Is the purpose of these questions to show that these wells do not affect the plaintiffs' developments?

Mr. Britt: The purpose of cross examination is to educe facts. We are seeking to ascertain--

Mr. McKinley: It indicates that they are seeking to educe facts adverse to their pleadings.

Mr. Britt: Which pleadings?

Mr. McKinley: Plaintiffs' pleadings.

Mr. Britt: That shouldn't concern counsel for defendants.

The Court. Overruled. Exception.

A One of the first grounds is from the testimony as shown in the tabulation on pages 89 to 93, showing elevations of all the San Antonio company's wells, the Hellman well no.

2 and well K, which is one of the wells on the lower plane over there, showing that--

Q Whose well is this well K?

A It belongs to the Cucamonga Water Company on the 65 or 60-acre tract north of Base Line,-- showing a difference of elevations somewhere in the neighborhood fe of 50 or 60 feet all the time. It might vary from 40 to 70, but it was always from 50 to 60 on the average. That is, at well K. And another proof of the same thing is the testimony offered by Mr. Cousins on page 4889, where he shows the Sunset well no. 1 and also well K once or twice, and showing on a general statement that there is something like 60 to 70 feet between Sunset well No. 1 and, say, Hellman well No. 2 or the San Antnio wells.

Q You refer to the 16th Street wells of the San Antonio Company?

A Yes, sir.

The Court: Q Your inference is that the Sunset wells do not interfere with the Lone Star-- with the Y Tunnel?

A Yes. My belief is that they are connected with the Hermosa Well K and all the wells of the 35-acre tract. They are all in sympathy and work together as one body of water. They are simply on another plane entirely.

Mr. Britt: What particular data do you draw that conclusion from? What elevations?

A We have a few measurements of the Hermosa well which, of course, is a good deal higher all the time than the others, but it is in that same direction that my own belief is that the water comes from, and it is simply further up

the mountains. But I think it is connected with the same water source.

Q Further up?

A I mean further towards the mountains. I think it is half or three quarters of a mile beyond the Sunset well.

Q What I am inquiring about is some specification of the measurements of the several wells which indicate this great difference between the water plane in the Sunset well, the Hermosa well, and well K.

A Take ~~xxx xxxxxxx xxxx~~ March 14, 1909-- last month-- the Sunset well was 1304.55 feet elevation, and well no. 7 was 1374.36; very nearly 70 feet difference.

Q What is the Haskell well?

A Yes, sir; the Haskell well no. 1. And take another date here of June 10. 1907, and the Sunset well was 1300 and the Haskell well was not given on that date, but the Hellman well is at 1359/75, making a difference of 59 feet.

Q What do you call the Hellman well?

A No. 2 at the head of the west branch of the Y Tunnel;and well K and the Sunset well at all times where they have been measured on the same date, are always within one or two feet of eachother. except when pumping affects them; they seem to be about the same elevation. We have very few measurements of well K since Mr. Trask gave his in about two years ago.

Q His measurements of 1904 and '5?

A Yes; I think it ran into 1906.

Q I think you included in that same category some of those wells in the 35 acre tract.

A I included them all; there is five of them.

Q Where are the elevations of those wells?

A We have no elevations of the wells themselves, because they are all connected with the tunnel no. 2 of the Lone Star-- the lower tunnel, and so they are all affected by the rise and fall of the water behind the bulkhead, as it is opened or closed. But we have measurements of the height of water in the tunnel when the bulkhead was closed at different times.

Mr. Goodsell: Q Then, if I understand you, the elevation given as to wells in the 35-acre tract are the elevations as they may be affected by the closing of the bulkhead, and also the inflow of water of the loamose to the xxxx xxx tunnel?

A Yes; the bulkhead being closed most of the time. If the bulkhead was open it would flow out. But as it is closed the water is raised and it affects all the wells, because they are all xfxxxxxx xx connected with the tunnel.

Q At the time the water is thus raised by the closing of the bulkhead and the inflow of the xxxxxxx xxxx xxxxx loamose water, as at those times that you have referred to, is the water still standing at as low an elevation?

A Yes. Not as low; I don't mean that. I think the tabulation will show that although the water is standing on April 3 some 40 feet deep in the tunnel, it is still 1328.4 xxxxxxxxxxx, and the water at the same date in the San Antonio no. 2 is 1375. feet, showing a difference of 47 feet higher than the water is now in the bulkhead,-- I mean in the tunnel affected by the bulkhead of the Lone Star Tunnel.

Mr. Bright: Q Ascertained in what manner?

A By measuring down from the top of the shaft.

Q Has the tunnel itself any such depth as that?

A It is 100 feet and more deep.

Q But the excavation in the tunnel is only about 6 feet deep.

A Oh, I suppose so; but we measured the water rising in the wells; the tunnel itself is only a six-foot tunnel. But it is the same as we measured the well no. 14 on the west side which is affected by the bulkhead of the Lady Tunnel.

Q You spoke about the east branch of the Y Tunnel and the discharge from it when you measured it a few days ago: Do you know what is the level of the east branch of the Y Tunnel as compared with the west branch?

A They are supposed to be the same, and are within one foot, but I wouldn't want to be more accurate than that. I mean at the head of the tunnel.

Q Of course, they are on the same elevation where thex two branches join. Then do they diverge from the same horizontal level, one going to the northeast and the other to the northwest? If so, how much?

A We don't think they do. We think they remain on the same gradex that they start at the common point, and are within a hundred feet of the same length and about the same elevation; but I won't say it is nearer than one foot. At the upper end there might be a variation of that much.

Q Where was the place that you measured the entire stream from the Y Tunnel?

A At the division box, about a quarter of a mile south of the mouth of the tunnel.

Q Does that receive the water of both branches of the Y Tunnel?

A Yes, sir; and also the water that is coming in from the cienega southwest of the Y Tunnel.

Q Is that what you call the China cienega?

A No, sir.

Q What is it?

A The old cienega that always used to be there that also was put in below the tunnel; and we couldn't measure the water the other day when we inspected it, but there was evidently some motion of water coming in. It was backed up from the box where the tunnel water comes in, and there was no way of measuring. It may be an inch and it may be two, or less. It is some water, undoubtedly.

Q I believe you stated that the east branch of the Y Tunnel production was between 2 and 3 inches.

A Yes.

Q And what percentage was that of the entire flow from the Y Tunnel?

A Practically 10 percent. There was 31 inches measured--31 and a fraction.

Q Where is the balance from?

A From the west branch of the Y Tunnel, unless there was a small amount flowing in from the cienega that I have just referred to. It is the main stream from the West branch of the Y Tunnel.

Q Had you any means of knowing how much of that was discharged from the well at the head of the west branch of the Y Tunnelx and how much from the sides of the tunnel below the

well?

A I certainly couldn't tell. I know, but I don't have any way of examining. It all comes from the well.

Q Is the head or highest part of that Lone Star Tunnel No. 2 virtually immediately beneath the lowest part of the Lone Star Tunnel No. 1-- the older tunnel?

A Virtually it is; I don't know within two or three feet.

Q There is a connection of some sort between the two tunnels at that point, is there?

A Yes, sir.

Q It has not been made very clear to me just how that connection is effected. Do you know how it is?

A I don't think I could explain it as well as Mr. Johnson did, who had charge of putting it in at that time. Mr. McConnel was the contractor and Mr. Johnson was in charge, and I don't think I could explain it to you. There was a shaft that goes clear down from the surface of the ground, clear down to the lower tunnel.

Q Well No. 5, which was at one time the head of the first Lone Star Tunnel?

A Yes, sir.

Q Was that well connected in any way with the Lone Star No. 2, thelower tunnel?

A Yes; certainly;it was cut off in Lone Star Tunnel No. 2

Q Then the second Lone Star Tunnel runs beneath the upper Lone Star Tunnel some 500 feet distance?

A Practically; it don't vary more than 10 or 15 feet anywhere from being right underneath it.

Q And runs for about that distance of four or five hundred

feet?

A Yes, sir.

Q And that well no. 5 is cut off in the present Lone Star Tunnel-- the lower tunnel?

A Yes, sir; that was the object of putting it down there that far-- to connect to the well.

Q Has there been any water other than pumped water from the upper Lone Star Tunnel since the construction of the lower Lone Star Tunnel?

A Not since the lower Lone Star Tunnel was finished up as far as well no. 5. I think that was about 1901 or 1900 that well no. 5 stopped ~~pumping~~ flowing. I couldn't tell you the exact date without referring to the notes.

Q Is the Lone Star well no. 5 pumped or has it been pumped in recent years to your knowledge?

A Not to my knowledge. I don't know anything aboutit.

Q Was it ever pumped to your knowledge.?

A Yes, sir.

Q When?

A Along perhaps in '90 or '91 or '2; in those years.

Q 189)?

A 1901, 1902 and 1903.

Q Was that before the construction of the Lone Star Tunnel No. 2?

A It was before the construction had reached that point.

Q You delivered this morning a tabulation of measurements of the two Lone Star Tunnels to the Reporter.

A Yes, sir.

Q Have you a copy of the tabulation? The tunnel called No.1

on this tabulation I suppose is the upper Lone Star Tunnel: Is that true?

A Yes, sir.

Q And the one called No. 2 is the lower Lone Star Tunnel?

A It is the lower one; yes, sir.

Q Opposite the date July 13, 1896, there is a statement " "Small tunnel built 1887." What small tunnel is that?

A That was the first Lone Star Tunnel that was finished from the opening of the springs up as far as the present well No. 5 referred to. It is about 500 feet, perhaps. That was put in to account for the increase of water from 2 inches up to 13.59 inches.

Q That was the same tunnel which declined to 7 inches in 1896, was it?

A Yes, sir.

Q You spoke of water which was received from the Loamosa pipe line and turned into the lower Lone Star Tunnel, and that it stood at a certain elevation above the tunnel: In your opinion where is that water stored?

Mr. McKinley: We object to that question as not cross examination.

The Court: Objection overruled. Exception.

A It is in the saturation of the ground reaching out in all directions, the east especially.

Mr. McKinley: Q Mr. Wright, are you employed as an expert in this case?

A I am sure I don't know.

Q Are you employed in this case?

A I am employed in this case.

Q By whom?

A By H. W. O'Melveny first and paid by the Cucamonga Vineyard Company.

Q Are you employed by the Cucamonga Water Company?

A I don't know. Mr. Kincaid wanted me to help them. He is president of the Cucamonga Water Company. I presume you might call it so.

Q Have you made any arrangement for compensation by the Cucamonga Water Company?

A No, sir.

Q What amount do you receive from plaintiff?

A I am paid by the day; $25 a day.

Q Under whose direction did you prepare the exhibit Z-24?

A Mr. Goodcell requested me to prepare that or have it prepared.

Q Did you have any consultation with plaintiffs' attorneys in regard to it.?

A No, sir.

Q Not at all?

A Not about preparing that.

Q. Did you submit it to them?

A They have seen it, but after it was made.

Q You discussed it with them?

A I think so; but it was after it was finished.

Q How frequently did you discuss it with them?

A I don't remember but once.

Q You went over all the particulars of it?

A Probably as much as he wanted to.

Q Now referring to exhibit O where you criticize, one of the

objections is that it didn't have all the factors which affected the discharge of the Y Tunnel and the springs.

A Yes, sir.

Q Is it your opinion that in order for a diagram to be effective it must have all the factors in which affect the matter that is sought to be determined?

A Well, you probably had better put in all the factors you think affect it.

Q Your rule is simply to put in what you think has any effect?

A What you would think has any effect on the facts.

Q And no others?

A Not if you don't think they have any effect.

Q You think the Lone Star Well no. 3 did have some effect on the gravity flow from the Cucamonga Springs and the Y Tunnel?

A Yes, sir.

Q In what way do you think the Lone Star wel affects the flow of the Cucamonga Springs ~~in~~ and the Y Tunnel?

A I think it draws some of the water that might find its way down there if left alone.

Q Is it your opinion that the whole of that country out there is in one saturated mass?

A Not in the way of moving free from one point to another. I think there are ridges between that it does not pass through.

Q And do you think it is divided into parts which consist of saturated masses?

A Yes, sir.

Q Do you think it is divided horizontally or vertically in

the ground?

A I think there are some obstructions in the ground which you could call dikes or clay beds which interfere with the free flow of the water.

Q Aside from those dikes, do you think the country is a saturated mass?

A Not all of the country, but most of the country around the Red Hills; but there is a difference in the planes, showing that the water does not come from the same source.

Q Do you think there are any water strata through there?

A There were.

Q Through the vicinity of the Red Hillx on all of the lands discussed here where any of the wells of the parties to this case are situated?

A I have no doubt of it.

Q Do you think this vicinity of the Red Hill is cut up into saturated masses?

A Not cut up; they are connected by strata here and there.

Q Do you think every one of those masses is connected with the other?

A Indirectly, yes; if you go high enough to get around.

Q Can you go low enough and get around?

A I wouldn't suppose you could get low enough under the Red Hills to get around from the 16th Street wells to well K.

Q Is it your opinion that the waters under pressure in this strata?

A It certainly is in some of the strata when some obstruction prevents its coming up to a higher elevation above it.

Q You have spoen of the Hermosa and the Sunset wells and

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the Cucamonga wells on the 35-acre tract being probably connected?

A I think so.

Q And you think they are connected by reason of the existence of the saturated mass in which they are situated?

A I think so. That is, it may not be all saturated; it may come in streaks as it does on the west side; but they are connected together, evidently.

Q Could you illustrate on exhibit 77 about what area you think is included in the saturated mass of those wells?

A A saturated mass does not mean that water moves freely from one place to another; there may be streaks through it of practically impervious stuff.

Q And portions between them that are not?

A They would be saturated, but the water wouldn't move.

Q That is, it is a contact but not a commercial contact, as some of the engineers call it?

A Yes.

Q Then you believe there are strata in which the Sunset well and the Hermosa well and the wells on the 35 acre tract are situated, which strata are connected with eachother?

A I certainly do.

Q What do you think about the Lone Star well no. 6 and no. 5?

A I shouldn't think they were connected. There must be something between them, or else water wouldn't stand 50 feet higher in so short a distance.

Q Are Lone Star wells no. 5 and 6 connected with any other wells?

A I think Lone Star well no. 6 is in the same water plane as the 14th Street wells and the Hellman well and the Haskell wells.

Q You think there are strata through there connecting all those?

A The elevations show it plain enough.

Q Do you think so?

A Yes, sir.

Q Are these strata in streaks or is there a broad expanse of it?

A I don't know

Q You do know, however, that the Lady Tunnel is connected with the Cucamonga Springs? Will you describe the subterranean connection?

A In my opinion they are not connected xxxx through the Red Hill, but connected by going up around the point as high as Base Line or even higher.

Q You testified once that they were connected at some point from two to five xxxxxxx thousand feet above Base Line.

A I don't know whether I did or not; they might have connected that high. I won't dispute it.

Q And the connection there you think is by a stratum extending from the Lady Tunnel and taking in all those wells around the head of the Lady Tunnel?

A I think most of those wells affect one another.

Q They are in the same strata?

A May be not in the same strata, but they would come together eventually. It might take a week or six months.

Q Is that connection in that locality or above the Base

Line?

A I think it exists higher up, but not higher than Base Line, I don't think.

Q You think the Eady Tunnel xx all the wells on the west side have a connection with eachother below the Base Line?

A No, not the deep wells.

Q Well, the Eady Tunnel and the shallow well.

A I don't know that I am qualified to state whether they are connected.

Q Then you don't know and don't even have an opinion on that subject. What about the deep wells? Do you think there is a connection between the deep wells ?

A I think there is a connection between the deep well 14 and the deep well above 16th Street by the sympathy between them--

Q I haven't got to that yet. I want to find out about this locality down here as far as you know xxx xxxx or think.

Q Do you think the deep wells and the tunnel and the shallow wells are connected locally at all, and have a connection below Base Line?

A I think if you shut up all of them you will get more water out of the other, so they are connected in the course of time.

Q Do you think that one of those deep wells will affect the Eady Tunnel by taking out water which is connected with the shallow well by a connection below the Base Line, or that the deep well affects the shallow well by drawing from some point where the strata join above Base Line?

A That would be more feasible.

Q You think that would more probably be the case?

A May be.

Q Do you think that the deep well and the 16th Street wells 1 to 5 have a local connection?

A I don't know how direct it is; I know they affect one another.

Q In your opinion how quickly does the pumping of well no. 3 affect wells 14 and 9?

A We haven't had proof of evidence of the pumping of one well affecting the other right away. We have had proof when they are pumping them all.

Q How soon xfxxxxx after the pumping of wells 1, 2, 3, 4 an 5 do you think the effect would be felt in wellx no.14?

A All we know about that effect, as far as knowledge goes, is the testimony in this case about how fast the water would fall in the tunnel when they arepumping the wells, and how much it rises and increases the quantity of the wells when you put on the bulkhead.

Q Haven't you reached an opinion?

A It don't take more than 30 or 60 days

Q Do you think it will affect it substantially within that time?

A Yes, sir; I mean it begins to show so that anybody could judge that it was the reason.

Q How do you think that is exercised? By direct connection of the strata down here, or by strata at some definite portion above base Line?

A I don't know.

Q Your opinion is that there is no connection through the

Red Hill?

A. That is my judgment; that there is no connection through that Red Hill. I can give you another reason. As youx talk head the tunnel, it has shown in the past two years on the west side the wells 3 and 4 and so on rose first and began to spread over to the east, and makes them a higher elevation all the time than Haskell well no. 7 and the otherwell, and it is from 3 to 4 or 5 feet higher than ordinarily they stood above the Haskell well no. 1 or Hellman well no. 2.

Q. When you speak of these things that are shown you mean they are shown by the evidence in this case?

A. Yes, sir.

Q. You have no facts outside of that on which you are expressing an opinion?

A. No, sir.

Q. Now in regard to the Haskell well 7 and 8: Do you think they are in the same direct connection with wells 1 to 9?

A. I certainly do.

Q. And that the effect is felt immidiately?

A. I don't mean in 24 hours, but they are certainly affected.

Q. Direct influence, and not by the joining of strata above Base Line?

A. It might come in a straight line, but not by a junction sour or five mies away. It may come half a mile. I don't know how far it comes.

Q. Is it your opinion that thestrata in which 7 and 8 or the Haskell wells 1 and 2 are situated are directly connected with the Y Tunnel and the wells in the Y Tunnel?

A Certainly.

Q That is, in a connection above?

A I don't think it is a connection above.

Q You think it is a direct connection?

A I don't mean like an open pipe, but it is connected like Lone Star no. 6 is with the Cucamonga Springs.

Q Then in your opinion that is connected with the strata in which the Y Tunnel and wells are situated?

A Certainly; we dried up those springs when we put in the tunnel.

Q Then you think they are directly connected?

A I don't know how directly connected, but they feed eachother.

Q Then as you have connected them all, do you say that there is a connection running by strata existing at wells beginning down at the Stowell wells and running up directly here, somewhere, that I have marked with a red line, and across from here along the string of wells, and through the well no. 6 and across to the Haskell well 7 and 8 and then into the Y Tunnel and also including the east side of the Y Tunnel?

A I haven't made any such statement.

Q But you have described each two of these as connected together.

A One certainly has an effect on the other. I don't suppose they are connected in straight lines.

Q I don't assume that they are straight lines. That is only approximate to the migrations which you seemed to describe.

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Q. You have an opinion that there is a direct influence between the Stowell wells and the 16th Street wells, and between the 16th Street wells and the Haskell well, and between the Haskell well and the T Tunnel and springs, carrying the line on down to the springs, wherever they are?

A. There is a connection; I don't mean on a direct line.

Q. But there is a chain running around the links of which exist clear around ?

A. Yes, sir; you can't bore a well in one place but what it will affect the other, if you pump out enough or draw out enough.

Q. Then you conclude from that that your testimony heretofore given in this case when you made a connection between the Lady Tunnel and the Cucamonga Springs occurring somewhere up to 5000 feet above Base Line, was erroneous?

A. No, sir; I haven't made any statement that wouldn't agree with that. It may be clear up there. I don't know anything about where it is.

Q. Then you think the strata may run up this way? How many dikes do you think there are situated in that territory?

A. I don't think there are very many dikes after you get up above Base Line a ways; it is mostly smaller ones. That is, not dikes that stop all the water.

Q. The great dike is situated below Base Line at the Red Hills?

A. Yes, sir.

Q. What constitutes that dike.?

Mr. Britt: Objected to inasmuch as the witness has not professed to be a geologist or expressed geological opinions.

The Court: Overruled. Plaintiffs except.

A Some practically impervious clay or material-- reddish material- that stops the water flowing through it.

Q Existing as shown on the surface of the Red Hill?

A It is defined on the surface by the Red hill. I suppose it runs under ground in those directions.

Q And also on the surface of the little Red Hill?

A Yes, sir.

Q And also on the surface of the Red Hill between the 35-acre tract and the Y Tunnel?

A Yes, sir.

Q As I understand you, you are not of the opinion that there is any strata extending from the 35-acre tract to the Lone Star Tunnel and connecting around to the Y Tunnel?

A My opinion is that formerly before there were any developments made there, say 20 or 25 years ago, the water plane up above might have joined; but I don't think they have been joining lately. There has been too much water drained from the Lone Star Tunnel and there is not enough water coming in to supply it.

Q How long ago do you think it was that there was that condition of junction between the strata?

A There may be now; a couple of miles above there may be some connection.

Q You haven't any opinion as to whether there is a connection above, the wells of the 35-acre tract and the [illegible] and the tunnel--

A There may be, but it don't let much water spill over that way.

Q Do you think the drawing of the water has cut apart the water plane?

A It would, if it drew the easterly plane down and the other too, so that there would be a little ridge between them and that the water is divided at some point above, perhaps half a mile or two miles.

Q You have no means of determining whether there is a connection by strata above here except the coincidence of the fall of water and the dropping of the water plane or the failure to drop in certain wells?

A That is certainly all I have.

Q Now with reference to the table that you have shown here; In the Y tunnel, have you ever known a season when there was not a fall between May and August?

A Ordinarily there is generally some fall between May and August.

Q Ordinarily there has been a considerable fall between May and August.?

A Most all streams-- That always falls some, and it is a good stream too.

Q During that period do you believe that the previous rainfall has always affected that or only prior to 1900-- that it has always affected the quantity in the Y Tunnel or Cucamonga Springs, or only previous to 1900?

A It has always affected itx.

Q In about what length of time does the rainfall affect the supply in the Y Tunnel and Springs?

A The Y Tunnel or springs, either, are not affected immediately by the rainfallx. In the last four xxxxx winters

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the winter measurement has not been so very much higher even in the creek.

Q Will you describe the falling off of the Lone Star Tunnel? To what do you attribute that?

A It drained out all the water that there was in that surface that the tunnel reached.

Q Don't the Y Tunnel do the same thing on the east side?

A It came very near doing it till 1900 when we started to improve it again, but that was before we put down the wells.

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Here the Court takes a recess until to-morrow, April 21, 1909, at 10 o'clock a. m.

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J. M. McKINLEY.

IN THE

Superior Court

OF THE

County of San Bernardino

State of California

Cucamonga Vineyard Company, et al.,

PlaintiffS

vs.

San Antonio Water Company, et al.,

DefendantS

Vol. 57.

Wednesday, April 21, 1909

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I. BENJAMIN, Official Reporter

Wednesday, April 21st, 1909. Fifty-seventh day.

A. H. ANDERSON.

A. H. Anderson, heretofore sworn and examined, being recalled by plaintiff, Old Settlers' Water Company, testified as follows:

Mr. Waters: Q You have testified in this case of one or more occasions when you passed the place where Riche's store once was at Cucamonga, and that you found no water flowing there either in the stream or the ditch near that place.

A Yes, sir.

Q Now, upon any such occasion, did you go up the stream in order to hunt for water?

A Yes, sir.

Q State what you found and where you went.

A I don't just remember the distance, because I never paid no particular attention to the distance; it must have been in the neighborhood of 150 yards.

The Court: Q What year was that that you are speaking of?

A I couldn't tell you exactly. It was some time in the 60's I think.

Q The early 60's or later 60's.

A The later 60's. I am a very poor hand to recollect dates unless there is something that attracts my attention to make a minute of it. I went up there and I found that the old ditch that came down by Riche's had a dam in it, and there was a ditch came out going quartering towards the wash to the west.

Mr. Waters: Q What did you find in the ditch?

A Found plenty of water in the ditch. There seemed to be

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the full flow of the creek.

Q Were you there shortly after that again at the same crossing?

A That would probably be when I was going down to the coast for freight. I don't recollect but what there was water in the ditch when I came back -- in the old ditch.

Cross Examination.

Mr. McKinley: Q How large was this ditch that you saw carrying water? How wide was it?

A It seemed to be cut down. I know when I led my mules they had to get down into it, and kind of caved off. It was probably 3 feet wide, and probably afoot and a half or two feet deep in some places.

Q How far below the top of the ditch was the surface of the water that they had to get down to?

A Probably a foot and a half, and may be not so much. In the neighborhood of that I should judge.

Q You don't know where this water went to from there? That is, you didn't see where it went to?

A Well, I can tell you where I think it went.

Q No, I don't want to know where you think it went. If you saw where it went I would like foryou to tell me, but if you didn't I don't want it. You didn't see it cross the road anywhere as you went along there?

A To the best of my opinion I did. It went out to the west and then turned down and went south right into the west end of the old stable -- the stage stable -- and continued south. Where it went from there I don't know.

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Q Whereabouts was it that it crossed the road to do that?

A It crossed the old road about 3 or 4 hundred feet or may be more, right west of the Riche's house.

Q What did it cross the road in, a ditch or flume?

A A ditch.

Q How wide was the ditch.

A The ditch wasn't deep at all. It crossed there in a ditch very similar to where it run down to Riche's. It was a nice crossing.

Q And it wasn't large enough to interfere with driving across?

A Not a bit.

Q How wide was it?

A It may have spread 4 or 5 feet.

Q About how deep was the water?

A I don't know. Probably 3 or 4 inches. I never paid no particular attention to the water, only to hunt for water when I wanted it.

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E. T. WRIGHT.

E. T. Wright, being recalled by defendant Cucamonga Water Company, testified as follows:

Direct Examination.

Mr. Goodcell: Q Mr Wright, in answer to a question put to you by Judge McKinley yesterday afternoon, with reference to Defendants' Exhibit X 24, I understood you to say to him that that exhibit was prepared at my request.

A I certainly think you asked me to. That is my memory of it.

Q Is there any one line on that exhibit that was not included in my request or instructions to you?

A I think when you asked me to make that profile, you did not mention the out-put from the Mady Tunnel.

Q That is my recollection of it. Taking the line as indicating the out-flow of the Mady Tunnel, what was the condition as to that tunnel being closed by the bulkhead at the time of the measurements represented by that line? It certainly could not have been closed or there would be no water flowing. That would be the best proof of that. It was closed as much as they dared close it for perhaps the first 30 days. There were about a hundred and some odd inches flowing out, being 104 and 111 miners' inches flowing. That was as much as they dared close the bulkhead.

Q Do you know at what time the bulkhead was opened more widely for the purpose of irrigation?

A Only from the measurements of the water flowing -- that is, the dates between the two measurements -- one was made the 19th of March, 1908 of 106 miners' inches flowing, and

the next was the 29th day of March, 1908, 192 inches flowing, and some time between these two dates the bulkhead must have been opened wider to allow the water to flow.

Q And then there is one point shown on that line when there was a rise from 196.56 inches to 317.66 inches?

A That was between the 7th and 17th of June. The bulkhead wasopened still widerso as to allow some 123 more inches to flow.

Q During the times represented on that exhibit, was the flow from the Eady Tunnel regulated by means of the bulkhead.

A All the time, yes.

Q What was the condition, so far as you know, as to the water having been backed up in the tunnel prior to the opening of the bulkhead?

A It certainly was backed up in the tunnel; the elevations could be looked up easily enough to tell. Some 50 feet at Well No.9 or 14 or thereabouts in March or April, 1908.

Q Then the line on the Exhibit representing the discharge from the Eady tunnel indicates the quantity of water taken out through the opening of the bulkhead?

A Yes, sir.

Q Have you any means of ascertaining and can you state, what would be the flow from the Eady Tunnel at that time without the bulkhead? That is, if there had been no bulkhead there?

A I don't think there is any way of telling any such thing as that, except by comparison of the three years, 1894, '5 and '6, when there was no bulkhead, and that would not be just because there undoubtedly would be more water now than it

would be the last year when we made measurements without the bulkhead.

Q When the water is backed up in the Andy Tunnel by the closing of the bulkhead,-- of course one effect is to raise the water in the tunnel and elevate it in the wells?

A Yes, sir, it would saturate the ground. It has that effect more or less. It also has the effect of putting a cushion and storming a certain amount of flow from these wells. It puts a weight of from 50 to 60 feet of water on the wells and interferes with the flow just to that extent.

Q Can you state whether the water that has backed up in the tunnel and wells seeps out to any considerable extent into the surrounding soil?

A Do you mean on the surface?

Q Not on the surface of the ground, but whether the water spreads laterally by seepage and so forth from the tunnel and wells?

A Certainly, that is the main part of the storage. Undoubtedly the soil itself that has been drained out for the three or four years that it was wide open, it is saturating it and filling up the pores.

Q Then the main storage is not in the open part of the tunnel, but in the gravels surrounding the tunnels that are used as a reservoir for the storage of water?

A Yes, sir.

Q When you speak of the soil,being open, you mean the spaces in the soil being free from water.

A I referred to that mostly, because the tunnel was opened several years and the tendency is to drain the land above it.

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It has been opened three or four years, and I guess probably longer than that in fact.

Q The measurements as represented on this exhibit extend from March to October inclusive: Do you know what the condition was as to the Lady Tunnel during the latter part of that period, as to whether the storage waxter backed up in the gravels by means of the bulkhead had all been drained out?

A No, I don't know; only from the flow I would suppose not; because I know in October or some time thereabouts, the depth of the water in the tunnel got down very low; either entirely at the surface at Well No.14, it was one time last fall, or it was a small pressure on the wells themselves; and I don't suppose the water would drain out of those gravels in a week or two weeks or three weeks.

Q Have you sufficient data or information on which to base an opinion comparatively, as between the out-put from the Lady Tunnel and the out-put from the pumped wells on Sixteenth Street, as to which exercises the greater effect in the way of depleting the flow from the Y Tunnel and the Cucamonga Springs

A I don't know that I have any data, any more than is in the court here, or before the court, and that the Sixteenth Street wells being above the springs and above the Y Tunnel, and nearer to them, would affect them quicker than the Lady Tunnel, because it is a nearer distance; that would be my only reason for saying that I think so.

Q Is there anything in the way of a dike or barrier in the way of soil formation, between the wells in the Ldy Tunnel and the Y Tunnel and the Cucamonga Springs which might affect

the question of interference as between these two?

A Do you mean in a direct line?

Q Yes, sir.

A Why I have no doubt, there is no doubt there is a barrier- that the Red Hill is practically a barrier as far as intercourse between the Lady Tunnel and the Cucamonga Springs; I don't know that but I believe it.

Q That belief is based upon your own observation and ~~information~~ information?

A Why, as near as I have had any ability to observe from the effects of one or the other, yes, sir.

Q Is there any barrier that you know of in the way of a dike or any impervious material between the Y Tunnel and the Cucamonga Springs, and the Sixteenth Street wells?

A I don't think so at all. The testimony in the case shows not, and the results show not, both. Mr. Tinkle testified there is nothing between them -- one of them -- that is, one of the witnesses.

Q And you have spoken of a barrier which in your opinion would prevent a direct sympathy or interference as between the wells in the Y Tunnel and the Springs, and the wells in the Lady Tunnel?

A I believe that large Red Hill would not allow free interchange of water between the springs and the Lady Tunnel.

Q To what extent, if at all, does that hill or the barrier or dike represented by the hill, extend to the north, and beyond the line of direct communication between the Lady Tunnel wells and the Cucamonga Springs?

A All I can judge would be merely the surface indications,

that it goes nearly to the Base Line, and undoubtedly slopes down then, or goes out of sight then, as far as any one can see.

Q Then if there is any interference between the wells in the Mady Tunnel on the one side of the Red Hill, and the T Tunnel and the Cucamonga Springs on the other side of the Red Hill, that interference would be by some means of indirect drainage, extending up as far north probably as Base Line, and working around from one to the other by an indirect line?

A Well, that is my opinion, very positively.

Cross Examination.

By Mr. Britt: Q When you speak of the Red Hill, being in your opinion a barrier, do you mean that it is an entirely impervious barrier through which water does not percolate, or that there is a less freedom of movement of water in the Red Hill, or some portions of it?

A Wel, I think through the Red Hills east and west, there would be such a slight movement that it couldn't be called a movement, because I don't think it would amount to much; it may be all saturated all through there; although the first thousand feet of the Mady Tunnel when it was first built, was all in dry earth -- nearly a thousand feet, I think, before we struck water.

Q You have yourself observed water percolating from the side of the Red Hill in cienegas, have you not?

A Why certainly; that is the source of the water, on both sides originally, before tunnels and wells were dug.

Q From which direction do you think that water percolates?

A It comes from the north.

Q Speaking of the Mady Tunnel, and the excavation of it, what was the nature of the material that you penetrated in the first thousand feet? Do you remember anything about that?

A Why, not a recollection of having put it down at the time; I only recollect that I was there possibly once a week or possibly once in two weeks during the time they were digging the tunnel that first year; as far as describing details, so many feet of one material and so many of another, I couldn't do that; it was heavier material to start with than we reached later on; I know that when we would strike water it was in pockets of gravel, small streams; we did not get a very heavy stream of water until we got up, possibly it was 15 to 1800 feet,-- in that neighborhood -- before we began to feel paid for running the tunnel.

Q Paid in what way?

A I mean paid in quantity of water produced.

Q What is the situation of the bulkhead which was placed in the Mady Tunnel and closed down in January, 1907, relative to the places which you just mentioned where water was obtained in material quantities?

A It is below where the water was obtained in material quantities, nearer the mouth.

Q What is the distance of that bulkhead above the mouth of the Mady Tunnel?

A I don't think I have any measurement of that myself, unless I would scale it on the map.

Q Do you know about what it is?

A About 1200 feet I should judge; it may be a hundred feet either way.

Q You spoke about some wells the flow of water from which into the Eady Tunnel is restrained as one of the effects of that bulkhead, the bulkhead holding back the water, and the weight of the water being imposed, as I understand you, above the mouth of the wells.

A That is correct.

Q Do you know about the age of these wells, when they were put down?

A All the wells but one were put down between 1896 and 1902; there was one small well that really had ceased flowing that we bored into the tunnel during the progress of the first tunnel in 1887; and it never flowed over two or three inches of water; I don't think it was over 150 feet below the bottom of the tunnel, either; it was about just above where we ran the branch tunnel under the creek bottom to the west, just ~~abo~~ above that point.

Q That would be in the neighborhood of 2000 feet above the mouth of the tunnel?

A In that neighborhood, yes, sir.

Q Was the water from that well accustomed to discharge into the tunnel after 1887, or did it cease flowing?

A Yes, sir, after 1887 it ran into the tunnel as long as it flowed, but it stopped flowing inside of the first year or two years, and didn't flow at all.

Q Then all the other wells were bored and connected with the tunnel after 1896?

A Yes, sir, all of them are connected with the tunnel yet, I mean. There are two artesian wells, one and two, on the 90-acre tract that never have been connected with the tunnel, and are not now; they were the first wells bored, in '87 and '88, and yielded, each of them, something like from nine to ten or eleven inches of water at the time they were bored, in '87 or '88.

Q I thought you said there was only one of these?

A That one I referred to was cut into the tunnel; these two are not cut into the tunnel at all -- not yet.

Q. Are those flowing wells?

A They were flowing wells; they have not been flowing wells for -- I guess the last measurement of these was about 1900, when we trenched a ditch into them and they flowed from one to two inches each, something like that.

Q How far were they from they tunnel?

A The first one is what has been known in this case as artesian No.2, and is about 400 feet east of the tunnel and very close to the north line of the 90-acre tract; and the other is No.1; it has not been measured or utilized in this case at all, and it is nearer to the north-east corner of the 90-acre tract, and about 300 or 400 feet further east.

Q And you say they were connected with the tunnel at one time?

A No, sir; never. Artesian No.2 was connected by another tunnel with the surface of the earth, but not connected down at the elevation of the Tady Tunnel.

Q Has it flowed or supplied any water in recent years?

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A Not for nine years past -- say eight years, call it, to be safe.

Q Are those the wells which are connected with the Lady Tunnel shown on the map Exhibit 1?

A I think eight wells are shown here on the map, on the Ontario Power Company property; and the two wells of the Cucamonga Water Company which were put down in 1902 and 1903 are just shown in a pencil mark on the map, but they are not numbered.

Q Are those on the 90-acre tract?

A Yes, sir.

Q You say they were put down in 1902 and 1903: Do you mean one in 1902 and the other in 1903?

A I think they were commenced in 1902, and perhaps finished in 1903; they were connected up with the tunnel until February, 1904.

Q Do you know anything about the quantity of their discharge into the tunnel, those two new wells?

A I knew nothing about it at the time; I have measurements on Exhibit 3 showing the measurements of one or two years right along constantly, right along every day.

Q From those two wells.

A Yes, sir; those are measurements on weir 4 and 4a.

Q I wish you would refer to it.

A The measurements commenced here January 21, 1904, and some time within the next 90 days the final connection was made, and the siphon taken out. -- made on the grade of the tunnel with the last of these two wells, by a branch tunnel

to the right -- by a branch out of the Eady Tunnel, a small tunnel about 100 or 110 feet in length , on the grade of the Eady Tunnel though.

Q What was the quantity of the discharge from them?

A It is given every day; the first is 77.5 inches, and it stays between 70 and 80 inches until February 16th, the daily measurements; then there is 61 inches; March 1, there is 84½ inches.

Q That is for the two wells.

A That is the two wells; yes, sir.

Q March 1, 1904?

A 1904. Then there is a skip for about a month nearly in the measurements, and then the measurements run along through up to July 6th, ~~[illegible]~~ at about from 82 inches down to 70.43 inches; and then the measurements are continued along here, gradually falling off. In August they were between 60 and 65 inches from these two wells, and by September they were under 60 inches.

Q How late are those measurements continued in these two wells independently of the others?

A I think they were practically continued up to the time the bulkhead began to have an effect. I can look right down this column and see. They are continued regularly up to June 4th, 1906 when Mr. Reed stopped his measurements.

Q What was the amount then?

A On that last date it was 63.72 inches. It had varied all the way from 42 up to 65 and 70 inches, in that year and a half, between these two figures.

Q Were these two wells the principal supply of the Cucamonga Water Company?

A I think they were.

Mr. Goodcell: As to the Eady Tunnel of course.

Mr. Britt: Yes, as to the Eady Tunnel.

A Of course I mean in the Eady Tunnel.

Q That well No.4, Stowell well, or '96 well, as it has been variously denominated, is above the 90-acre tract is it?

A Yes, sir; it is on the property that is now the property of the Ontario Power Company, as I understand it.

Q There are no independent measurements of those two wells after June, 1906?

A The last I have got here, I have got October 1st, 1906, one made by Johnson, on this same Exhibit 3; that was 62.85 inches; that is the last that I have, because the bulkhead was put in the next January, and from that time on in '96 we had no men making regular measurements on the property there.

Q Are there any independent measurements that you have or that you knowof here, of that well No.4, the discharge from the well No.4?

A Not that I know of at all.

Q It is all included in the discharge of water over Weir B?

A Yes, sir, over weir B or cement shaft B, referred to in this case.

Q Above the 90-acre tract?

A Above the 90-acre tract.

Q Now, those wells of the Cucamonga Water Company discharging into the Eady tunnel, were they ever capped?

A Well, I would personally say no, because I don't know of it, but I think I heard it testified on the stand that they were capped.

Q You visited them frequently?

A I visited them and have seen them but I don't know of their being capped.

Q They were not capped when you saw them?

A They were not capped when I saw them; but I didn't go to them all the time, and not so very regularly, down in the wells and the tunnels there.

Q In that formation, where the water was found in the process of running the Sadie tunnel, where it was found in such material quantities, as you thought in some sort paid for the effort that was made to discover it, was that under the Red Hill?

A Yes, sir; it was before we got into what we call the flat of the creek-bottom.

Q Before you had passed out from under the Red Hill?

A Before we had passed out from under the surface of the Red Hill, where it goes down the steep bank; yes, sir.

Q When I say under the Red Hill I mean, and I presume you mean under the Red Hill, as shown on the surface of the ground?

A Yes, sir; that is what I mean.

Q And it was near the west side ofit?

A It was right along the west bank; along the tunnel is practically on the west bank of that.

Q As you continued to drive the tunnel northward, what

was the nature of the accretions of water?

A I think they increased; well, we found more water coming in the face, the further up we went, and the majority of the water came in at the face of the tunnel, almost entirely; it was very seldom that any streak we would strike of it, and about two bents in or timbers, but what the water would quiet down considerable, and increase, at the face of the tunnel.

Q These two wells which were connected with the Sadie tunnel by the Cucamonga Water Company, were the last wells bored by the Cucamonga Water Company in that locality, connecting with the Sadie tunnel, were they?

A Yes, sir.

Q Did you observe anything of the process of making the connection between the wells and the tunnel? Were you in the tunnel or about the work when it was going on?

A Only the times I would go out there; I wasn't going out there in 1903; I have a reference to three times that I was there in that year, when they were working towards the well, and they made a siphon, and they had the usual difficulty in getting to a well that flowed considerable water.

Q What was the character of the difficulty?

A Well, it was the amount of water, and they could not brace the timbers; they could not get the timbers in, quic ksand as they called it - probably very little sand in it.

Q It was the amount of water?

A It was the quantity of water that poured in, and they couldn't get the timbers set in place, and it fell downfrom the roof.

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Q On account of the amount of water in the soil?

A Yes, sir; probably coming from the well; at least that is our experience.

Q you noticed something of the process of connecting the well at the head of the Eadie tunnel, well number 14?

A I was there two or three times I think; only once after May, 1902, though.

Q How did these difficulties encountered by the Cucamonga Water Company, in connecting up those two late wells, compare with the obstacles in the way of connecting well 14, with the Eadie tunnel, obstacles which have been somewhat described?

Mr McKinley: Objected to as irrelevant and immaterial, not properly cross examination; and already fully covered by the testimony.

The Court: The witness was asked by one of the counsel whether there was a sympathy between the wells on the east side and the west side.

Mr Britt: He was asked by Mr Goodcell, and I believe Judge McKinley went into it at length.

The Court: I suppose there is a contention here by some of the parties at least that the waters on the east and west sides have a common source somewhere to the northward, and while there may be some impervious material separating them below, they would affect one another by going back to the point of junction, and around to the opposite side; and to illustrate that question it would seem to be pertinebt. the objection is overruled.

Mr McKinley: Exception.

A Why I should consider them a good deal the same in proportion to the amount of water that was forced up by well number 14, and the other two wells, there being more forced up around well 14, than there was at the Cucamonga Water Company's wells; and consequently probably a little more difficult to make that connection.

Q How was the formation of the soil at the two places - the nature of the soil?

A Oh, they were both gravel.

Q What is the distance apart of those two Cucamonga Water Company wells?

A I have not my note book with me, but I think they are between 50 and 60 feet, between 50 and 60 feet.

Q And how far from well number 14?

A I would either have to scale it on the map or make some guess at it (Scaling on map.) In the neighborhood of 800 feet in a direct line, but one or two hundred feet longer by the meander of the tunnel.

Q In answer to some questions by Judge McKinley, and also by Mr Goodcell, you expressed the view, that the water discharged from the Ladie tunnel, was in connection with the source of supply from the 16th street wells, and that there was an effect or influence interchangeably, between the water of the Ladie tunnel, and the output from the 16th street wells:, Have you made any compilation here to show the average output of the Ladie tunnel, for the years previous to the putting in ~~oxf~~ of the bulkhead.

A Yes, sir; for the years 1904, 1905 and 1906.

Q Have you the figures?

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A I have no copy with me.

Q Look at this and see if this contains the result of your compilation?

A This is the set of figures that I made up from the testimony in the case, giving simply the average for each month and then the average for each year, for those three years; it tends to show two facts to substantiate my statement; the first one being that the flow from the tunnel in the years 1904 and 1905, decreasing constantly, as the water was pumped from the 16th street wells; and then in the next year when there was no water pumped at all, that the output was much larger than it was in 1905, although that was the third year of the tunnel being opened, with all the wells flowing into the tunnel, no bulkheading or capping of wells.

Q When you speak of all the wells flowing into the tunnel what wells do you refer to?

A I mean the same amount that are flowing in there now; there have been none cut in there since then.

I can give it by the month if desired. In the year 1904 the Ontario was 164 inches, and the Cucamonga Water Company 8kmxx 81 inches, making a total of 245 inches

Q What do you mean by Ontario?

A I mean the water flowing through weir number 2 to Ontario.

Q At the mouth of the Kadie tunnel?

A Yes, sir.

Q Through what company's pipes?

A Probably through both the San Antonio Water Company, as I understand and the Ontario Power Company.

Q Those are the only pipes connected with that weir?

A Yes, sir.

The next year, 1905, the flow to Ontario averaged 119 inches, and to the Cucamonga Water Company 88 inches, showing a total of 207 inches flow at the mouth.

In the year 1906, as I said the third year of the tunnel being opened, since the wells 14 and all of the Cucamonga Water Company's wells were connected in flow with the tunnel, Ontario's average was 152 inches, and the Cucamonga Water Company, 63 inches, making 235 inches, showing the flow of 1906 was materially larger than 1905, although it was a third year of tunnel with open wells to the tunnel, and there was no pumping in 1906 from the 16th street wells.

Q What is the significance of the circumstance that it was the third year when all the wells were opened and flowing into the tunnel? I notice you have mentioned that two or three times.

A Simply all wells and all tunnels, with no exceptions perhaps, continue to decline if they are allowed to be open from year to year, if there is no capping of the wells, or no bulkheading of the tunnels, they will continue to decline in their output; is the almost universal rule.

Mr Britt: I ask that the tabulation last referred to by the witness be handed to the reporter and copied into the record.

The Court. Let it be copied in.

Said tabulation is here extended into the record as follows:

EXHIBIT 3.

AVERAGE OUTPUT HADY TUNNEL.

1904.	ONTARIO.	C. W. CO.
Jauary	229.	115.
February	198.	116.
March	181.	121.
April	184.	110.
May	181.	115.
June	179.	112.
July	167.	81.
August	149.	78.
September	141.	67.
October	131.	60.
November	120.	60.
December	112.	61.
	1972.	1096.

Ontario average, 164.
Cucamonga W.Co., 91. 91

1905.		
January	117.	69.
February	124.	79.
March	130.	83.
April	135.	87.
May	29.	197.
June	132.	108.
July	131.	105.
August	143.	81.

	ONTARIO.	C. W. CO.
1905.		
September	133.	71.
October	118.	60.
November	114.	62.
December	117.	70.
	1433.	1053.

Ontario average, 119
C. W. CO. " , 88

1906.		
January	137.	73.
February	139.	71.
March	140.	73.
April	146.	80.
May	146.	85.
June	156.	84.
July	158.	84.
August	162.	86.
September	162.	86.
October	162.	86.
November	159.	85.
December	162.	86.
	1829.	999.

Ontario average, 152.
C. W. CO. " , 83.

Q Have you made any other compilation of elevations of waterin the Lady Tunnel after or before the bulkheading, and the elevations of water in the 16th Street wells or any of them, and brought them into comparison with the elevations of water in Hellman well no. 2 at the head of the Y Tunnel?

A Yes, sir

Q You have the table before you?

A Yes, sir.

Q Let me see it. How have you entitled this table?

A The heading is "Table showing sympathy of San Antonio Wells nos. 4, 5, 6 and 7 and Hellman Well no. 2 at west end of Y Tunnel; also the effects on wells in bulkhead ~~ix thx~~ when the Lady Tunnel is closed."

Q What does this consist of?

A This consists of elevations taken from the records in the different wells, and always on the same date for each well. And also in the margin or between the date and the elevations I have given the time when the 16th Street wells commenced pumping and when they closed any individual well, as taken from the testimony of Mr. Trask in the transcript of the case, and it commences with May 17, 1904, showing the elevations of San Antonio no. 4 is 1347.3--

Mr. McKinley: Wait a moment; when that is offered we will object to it.

Q State, if you please, what is shown in this tabulation relative to the closing or opening of the bulkhead in the Lady Tunnel.

A It shows that when the bulkhead was first closed--

Q Where does it begin? On what date?

A When the bulkhead was closed?

Q Yes.

A The bulkhead was closed on January 29, 1907. That is at the bottom of the second page. And prior to that it shows how the wells ran together and rose and fell together up to that time, and how they rose and fell, rising much faster after the bulkhead was closed.

Q It is those figures which I desire you to point out.

Mr. McKinley: Objected to as incompetent and a mere repetition of the evidence and not cross examination.

* * * * * * * * * * * * *

The Court: Overruled: Exception by Mr. McKinley.

A Showing the effects of the bulkheading of the Lady Tunnel.

Q State that, please.

A The effect is shown in the rise of the waters in the San Antonio wells 4, 6 and 7, or 4, 5 and 7, which I have on that date, and also the Hellman well no. 2, much more rapidly after the bulkhead was closed than before, as evidenced by the figures of the elevations of the waters in the wells.

Q I want the specification of the particulars.

A On February 2, three days after the bulkhead was closed in 1907, no. 4 was 1352.1 feet; no. 5 was 1351.6 feet; no. 7 was 1346.6 feet; Hellman no. 2 was 1347.5 feet. On March 2, just one month later, the San Antonio no. 4 was 1356. feet, showing a rise of 3.9 feet. No. 5 was 13[illegible].2 feet, showing a rise of 3.5 feet. No. 7, 1352.7 feet, showing a rise of [illegible].1 feet. Hellman well no. 2, 1350.2

showing a rise of 2.5 feet. Taking another date, in August, which was after they had been pumping, even,-- no. it was just as they were starting pumping,-- August 30, the elevation of no. 4 was 1370.5 feet, showing a rise of 14 feet. No. 5 was 1369 feet, showing a rise of 13.7 feet. No. 7 was 1364.5 feet, showing a rise of 11.8 feet. Hellman No. 2 was 1361.5 feet, showing a rise of 11.2 feet, Showing that the water rose much more rapidly or considerably more at the San Antonio wells 4 and 5 than it did over at Hellman well no. 2. And the rise of that six months, from February to August, was much greater than the rise the previous year when there was no bulkheading and there was no pumping.. as February 24, 1906, to August 24, about the same space of time, when there was no pumping in the wells, there was a rise of only 5 feet in well no. 4 and in wells no. 7 on the same date there was a rise of 4.1 feet, and at Hellman well no. 2 at the same time there was a rise of 4.3 feet. And the same effect is shown clear to the end of the paper, which is brought down to April 10, 1909. On each of those dates it is shown when they began pumping and when they ended pumping, and the elevations of wells on the different dates, showing that the bulkheading-- as soon as they put down the bulkhead the water rises much faster in the 14th Street wells than it ever did before that.

Mr. Britt: I ask that the tabulation be copied into the record by the Reporter for the purpose of illustrating the evidence of the witness.

Mr. McKinley: Objected to as incompetent and not cross examination.

The Court: Overruled. Exception by Mr. McKinley.

~~The following is a copy of said tabulation:~~

TABLE SHOWING SYMPATHY OF SAN ANTONIO WELLS NO.4,5,6 AND 7 AND HELLMAN WELL NO.2 (AT HEAD END Y TUNNEL); ALSO THE EFFECTS ON WELLS WHEN BULKHEAD IN EAST TUNNEL IS CLOSED.

		San Antonio 4	San Antonio 6	San Antonio 7	S. or Hellman No.2 head of W. branch Y tunnel.
1904 May 12		1347.3	1347.	1347.4	1345.1
19		1347.3	1347.1	1347.	1345.2
	Commenced pumping No. 6 May 19.				
26		1342.9	1346.2	1343.8	1343.6
June 2		1346.4	1345.9	1343.3	1343.2
11		1345.8	1345.3	1342.1	1342.2
	Commenced pumping No. 3 June 16.				
18		1344.7	1344.7	1341.8	1341.8
27		1343.8	[illegible]	1341.1	1341.2
	Began pumping No.5 July 1.				
July 2			1343.4	1340.7	1340.9
	Began pumping No.4 July 7.				
9			1342.6	1340.3	1340.1
16		~~1341.4~~	1341.4	1339.5	1339.8
26			1340.3	1338.9	1339.1
	Began pumping No.2 July 30.				
Aug. 3			1339.3	1337.6	1338.0
27			1336.4	1335.7	1336.1
Sept. 3			1335.9	1335.3	1335.7
	Began pumping No.1 Sept.20				
Oct. 4			1333.9	1333.1	1333.4
15			1332.8	1332.4	[illegible]
Nov.12			1331.6	1331.2	1331.3
Dec. 3			1331.0	1331.2	1330.2
1905 Jan. 7			1330.1	1329.2	1329.2

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		San Antonio 4	San Antonio 6	San Antonio 7	O. or Hellman No.2 head of E. Branch Y tunnel.
1905					
	All wells stopped pumping Jan. 7.				
Jan.11		1331.4	1331.0	1331.6	1330.0
Feb. 4		1335.7	1334.9	1335.1	1333.3
Mar. 4		1338.2	1337.2	1337.5	1335.8
Apr. 3		1339.9	1339.8	1339.2	1337.7
May 6		1341.6	1342.1	1341.0	1339.1
June 3		1343.	1343.3	1342.1	1340.2
July 1		1343.9	1344.0	1342.3	1340.3
29		1344.5	1344.1	1342.4	1340.5
Aug.16		1344.1	1343.9	1340.9	1340.2
	Began pumping No. 8 about Aug.13,				
Sept.8		1340.9	1341.2	1338.2	1338.0
	Began pumping wells 1 and 2 about Sept. 1.				
15		1338.3	1340.5	1337.4	1337.5
	Began pumping 3 & 4 about Sept.15.				
Oct. 7		1322.3	1336.2	1334.6	1334.9
23			1334.1	1332.9	1332.9
Nov. 4			1333.2	1332.4	1332.2
	All wells stopped pumping Nov. 6				
11		1335.9	1335.3	1335.1	1335.5
Dec. 2		1338.7x	1338.0	1337.7	1335.9
29		1340.8	1340.0	1339.4	1337.9
1906 Jan.20		1341.9	1341.1	1340.7	1338.8
Feb.24		1343.0	1342.6	1342.4	1340.0
Mar.27		1344.0	1343.9	1343.7	1341.6
Apr.24		1345.2	1344.9	1344.8	1342.9
May 28		1346.7	1347.0	1345.9	1343.6
June30		1347.4		1345.8	1344.0

		San Antonio 4	San Antonio 6	San Antonio 7	E. or Hellman No.2 head of E.branch Y tunnel.
1906 July 27		1347.8		1346.3	1344.
			(No. 5)		
Aug. 24		1348.0	1346.0	1346.5	
Sept. 1		1348.0	1348.0	1346.5	1344.3
29		1349.0	1348.7	1347.3	1345.0
Oct. 26		1349.5	1348.7	1346.9	1344.7
Nov. 24		1349.6	1348.8	1346.8	1344.8
Dec. 22		1349.9	1349.7	1347.8	1345.3
1907 Jan. 11		1350.8	1350.3	1348.7	
	Bulkhead in Eady tunnel closed Jan. 29.				
Feb. 2		1352.1	1351.8	1349.6	1347.8
March 2	Water in Eady tunnel 38' at No. 9	1356.0	1355.3	1352.7	1350.3
31	Water in Eady tunnel 43' at No. 9	1360.5	1360.5	1356.6	1353.4
Apr. 27	Water in Eady tunnel 52' at No. 9	1366.3	1366.0	1360.6	1357.3
May 6	Water in Eady tunnel 44' at No. 9	1367.0	1366.8	1361.7	1358.8
June 1		1367.1	1366.7	1362.6	1359.3
July 11		1368.4	1367.6	1363.3	1360.2
Aug. 17		1369.9	1369.1	1362.8	1360.7
30	Com. pumping No. 6 Sept. 5; Com. pumping No. 1 Sept. 7; Com. pumping No. 4 Sept. 17.	1370.0	1369.0	1364.5	1361.5
Sept. 19		1365.0	1366.1	1360.4	1359.1
Oct. 12		1363.4	1363.6	1358.6	1357.6
19	All pumps stopped Oct. 19	1362.8	1363.1	1357.9	1356.9

1907		San Antonio 4	San Antonio 6	San Antonio 7	S. or Hellman No.2 head of W.branch Y tunnel.
Oct.31		1369.6	1368.5	1362.9	1358.8
Nov.26		1373.1	1371.7	1366.6	1362.8
Dec. 4		1356.7	1360.1	1362.9	1361.7
	Started pumping wells 1,4 and 8 Dec. 4.				
14		1370.0	1369.0	1361.8	1360.9
	Stopped all pumps Dec. 25.				
1908 Jan. 1		1371.9	1371.6	1366.6	1362.0
	Well No.8 pumped 9 days in January.				
Feb. 2	Well 14 above tunnel 53 feet;	1375.	1373.8	1368.0	1363.0
29	56 feet;	1378.2	1377.0	1371.5	1364.6
Mar.30	57 feet;	1379.9	1378.7	1373.4	Flowing water
Apr.27	57 feet;	1380.7	1379.7	1374.5	"
May 27	59 feet;	1381.4	1380.0	1375.0	"
June 8	59 feet;	1381.8	1380.0	1375.8	"
	Wells 1 and 3 com. pumping May 16.				
20	56 feet.	1377.8	1377.7	1373.6	"
July 2		1375.9	1376.1	1372.6	Flowing water
	Well No.8 pumped 10 days of 14 hours				
25		1358.	1371.4	1370.0	" "
	Well No.4 pumped 19 days in July.				
Aug.29		1353.9	1367.4	1366.8	" "
	Wells 1,2,3,4 & 8 pumping Aug.				
Sept.5		1355.	1365.5	1365.3	Stopped flowing
	Wells 1,2,3, & 4 pumping Sept.				
Oct. 6		1346.5	1362.7	1364.0	No flow.
	Wells 2,3 & 4 pumping Oct. Not steady.				
28		1364.8	1364.5	1363.1	
Nov.22		1344.7	1360.4	1359,7	1356.6
	Wells 1,2,3 & 4 pumped Nov. ~~xxxxx level~~ Well 14 to level tunnel Dec.6				

1908		San Antonio 4	San Antonio 5	San Anto-nio 7	E. or Hellman No.2 head of E.branch Y tunnel.
Dec.26		1369.8	1368.6	1364.1	1360.9
	Well 14, 43' above tunnel Dec. 25.				
1909. Jan.29		1373.7	1372.3	1366.1	1363.1
	Wells 1,2,3 & 4 made 25½ days pumping one well.				
Feb.20		1376.8	1375.8	1370.8	Water flowing
	Well 14 is 54' above tunnel.				
Apr.10		1382.2	1382.3	1376.6	" "
	Water in [illegible] tunnel 56' at well 14.				

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Q Have you prepared some other comparisons illustrative of the same proposition between the San Antonio Well No. 5 and the Hellman Well No. 2, and the depth of water above the Eddy Tunnel at well no. 1 4?

A Yes, sir.

Q What does that illustrate?

A The tabulation is headed "Table showing elevations of water plane at San Antonio Water Company's well no. 5 and Hellman well no. 2 at the west end of the Eddy tunnel from 1905 to date.~~x~~ and the effect of bulkheading the Eddy Tunnel." This shows simply the dates; also, when the pumps commenced and stopped, and the elevations of the San Antonio Well No. 5 and Hellman Well No. 2, and the depth of water over the well in tunnel at the head of the Eddy Tunnel-- no. 14 well, or the defendants no. 9.

Q It shows the times when the pumping began on the 16th Street wells?

A It shows the time when the pumps began or stopped, and also the depth of water, and the effect it has on the rise of the water in the two wells referred to as compared with eachother, showing that the water rose in the San Antonio Well No. 5 much faster, or more and more difference between the two wells by the effect of the bulkheading, and making it obvious to me that the waterreaches by backing up the bulkhead and affects the San Antonio wells 3, 4 and 5, prior to its reaching Hellman Well No. 2; that it runs around in that direction instead of through the hill.

The Court: I understand that the tabulation of whichyou are now speaking and the other one offered in evidence, do not

introduce any new measurements?

A Not the slightest. They are tabulations of the two in proportion to each other. There is not a new-- It may be a new theory, but not new figures.

Q You have simply taken that which is already in evidence and grouped them for the purpose of illustrating your theory?

A Yes, sir.

Mr. Britt: Q Can you make some specifications of what the figures show in this regard, upon which you base your inference?

Mr. McKinley: Objected to as incompetent and not cross examination.

The Court: Overruled.

Mr. McKinley: Exception.

A In the year 1906, for instance ,-- the year when there was no pumping down of the San Antonio wells,-- the elevation of the water at the beginning of the year was 1343 feet in well no. 5, and at the end of the year the last measurement showed 1349.7 feet, or a rise of 6.7 feet in the year when there was no pumping. In the Hellman well on the same date it was 1340 feet, and at the end of the year 1345.8 feet, showing a rise of 5.8 feet for the year without any pumping. The next year, 1907 , the first measurement being February 2, there was pumping which commenced September 5. of the San Antonio Water Company's well no. 8,-- between the date of February 2 and August 30., there was a rise in the San Antonio well no. 5 of 17.2 feet, and there was a rise in the Hellman well no. 2 of 13.7 feet, making a difference in the two elevations at that later date between Hellman well no. 2 and San Antonio

3,5

no. 5 of 7.5 feet. On February 2 there was a difference of elevation of only 4 feet. After the pumping ceased the water continued to rise and showed an elevation over the bulkhead, starting with 29 feet on February 2, and 38 feet on March 2, 42 on May 6, 29 feet July 11, 21 feet on August 30, 16 feet on September 29, 13 feet October 29 and 40 feet November 20 of that year, showing that they didn't draw all the water out of the Gage Tunnel that season.

The next season the water rose from January 1st and May 27 from 1771.6 to 1780, a rise of 8.4 in San Antonio No. 5, and in the Holman well no. 2 we couldn't tell how high it rose because it was flowing and furnishing water.

Q Flowing into what?

A Into the Y Tunnel and measured at the division box. But the water of January 1st over no. 14 was 18 feet; in 908 on February 2, 52 feet; March 30, it was 57 feet and May 27, it was 50 feet, showing the hight that they had raised the water in the tunnel or in the wells in the tunnel, rather, and of course stopped the flow to that extent from the 16th street wells or the other water to the north-- it stopped the free flow of water in the tunnel.

Mr. Britt: We ask that the tabulation to which the witness has referred be copied into the record.

Mr. McKinley: Objected to as incompetent and not cross examination.

The Court: Overruled. I take it these tabulations occupy practically the same position as a diagram on the board illustrating a witness' theory. (Mr. McKinley excepts.)

The following is a copy of said tabulation:

TABLE SHOWING ELEVATIONS OF WATER PLANE IN SAN ANTONIO WATER CO'S WELL NO.5 AND HOLLMAN WELL NO.2 (AT WEST END Y TUNNEL)

FROM 1905 TO DATE, AND THE EFFECT OF BULKHEADING THE EADY TUNNEL.

DATE		San Antonio Well No.5	Hollman Well No. 2	Depth of water above Eady tunnel at Well 14.
1905				
Jan. 11	All pumps stopped Jan. 9	1331.2	1330.0	02
Feb. 4		1335.2	1333.3	0
Apr. 3		1339.4	1337.7	0
June 3		1343.1	1340.2	0
July 29	Commenced pumping No.5 about Aug.13	1344.1	1341.5	0
Sept. 8	Commenced pumping wells 1 & 2 about Sep.1	1340.9	1338.6	0
Oct. 7	Com. pumping wells 3 & 4 about Sep. 15	1334.5	1332.9	0
Nov. 11	All wells stopped pumping Nov. 5	1335.5	1333.5	0
Dec. 29		1340.4	1337.9	0
1906				
Feb. 24		1343.0	1340.0	0
Apr. 24		1345.3	1342.9	0
June 30		1347.2	1344.0	0
July 27		1347.8	1344.0	0
Sept. 1		1348.0	1344.3	0
Oct. 26		1348.7	1344.7	0
Dec. 22	Bulkhead in Eady tunnel closed down Jan. 23.07	1350.7	1345.3	0
1907				
Feb. 2		1351.8	1347.0	25.0
Mar. 2		1355.3	1350.3	38.
May 6		1366.8	1360.8	43.5
July 11		1367.6	1360.2	29
Aug. 30	Com. pumping well No.5 Sept.5 " " " " 1 " 7	1369.0	1361.6	21.
Sept. 19	" " " " 4 " 17	1366.1	1359.1	16

DATE		San Antonio Well No.5	Hellman Well No.2	Depth of water above Lady tunnel at Well 14
1905				
Oct.19	All wells stopped pumping Oct. 17	1363.1	1356.9	13.
Nov.26	Con.pumping wells 1,4 & 8, Dec.4	1371.7	1362.8	40.
1908				
Jan. 1	Stopped all pumps Dec. 26	1371.6	1362.8	18.
Feb. 2	Pumped well No.8 nine days in Jan.	1373.8	1363.8	38.
Mar.30		1378.7	Water flowing from T tunnel	37
May 27	Con.pumping wells 1 & 3 May 16.	1380.0	"	50
July 2	Well No.8 pumped 10 days of 14 hrs.in July	1376.1	"	32
	Well No. 4 pumped 19 days in July			
Aug.29	Wells No.1,2,3,4,& 8 pumping in Aug.	1367.4	"	16
Oct. 6	Wells No. 1,2,3 & 4 pumping in Sept.	1362.7	1361.4	6
Nov. 8	Wells No. 2,3, & 4 pumping some in Oct.	1362.5	1360.2	0
Dec.26	Wells No. 1,2,3, & 4 pumped in Nov.	1368.6	1360.9	43.
1909				
Jan.29	Wells 1,2,3,& 4 made 25 1/2 days pumping for one well.	1372.3	1363.1	50.
Feb.20		1375.8	Water flowing	54.
Mar.13		1380.2	"	54.
Apr. 3		1381.3	"	55.
Apr.10		1382.3	"	56.

Q Have you prepared any other specifications from the evidence illustrative of your views on the subject?

A Yes, sir. I have prepared another statement in tabulated form that reads as follows:

"Table showing water plane at Hellman well No. 2 at west end of Y Tunnel, Cucamonga Water Company's well No. 6 at the west end of Lone Star Tunnel No. 1, well K and Sunset Water Company's well No. 1, as affected by the pumping of wells and bulkheading Lady and Lone Star tunnels."

The first measurement on this table is on date of February 4, 1900. It was taken from Mr. xxxxxix Hinkle's testimony, I believe, of the elevation of some wells. The Hellman well was flowing water at that time.

Q At what elevation?

A I have it here 1366.5, but it would be immaterial what it was, because if it was 10 feet higher it would flow water on that day anywhere. That is the elevation I have been using when I took the levels for the first three or four or five days. It is really higher by a foot and a half, but the water escapes. so there is water flowing at the dates given of the elevation of 1366.5-- the water was flowing from the tunnel at that time. It also shows the date when Mr. Hinkle shows the elevation of the water in Lone Star No. 6 and well K. Otherwise, I think, all the well K measurements were taken from Mr. Trask's tables and the most of the Hellman No. 2 also; and of the Lone Star and Sunset measurements, a few of them were taken from Mr. Cousins' testimony. There are only a few of those, because we have no measurements--

Q You have the dates when the measurement is made?

A Yes; but very few of them. On this first page there are only 2 of the Lone Star and two of the Suunset. This table gives the time and length of pumping of all the 10th Street wells, the Lone Star well no. 6, the Sunset well no. 1, and the bulkheading of the Lady tunnel. It really don't give the dates, but it gives the depth of water over the well at the head of the Lady Tunnel, and also the depth of the water as near as we have it in the Lone Star Tunnel. Many times we haven't the depth and have to judge it from the years that we have them accurately.

Q Do you mean by depths--

A I mean depths to water in Lone Star Tunnel by being bulkheaded.

Q Do you mean by that the elevation to which it rose in shafts connecting with the tunnel?

A Yes; that is the way we measure all these elevations; well 14 or Lone Star well, when they are bulkheaded, we measure down the shafts and call that the tunnel level of the water. What this is designed to show and what it does show is that although the Hellman well no. 2 and the Lone Star well no. 6 have practically worked along from 1 to 2 feet of eachother at all times except when water was flowing out of the Y Tunnel, the elevation of well K and the Sunset well is all the way from 40 to 60 feet below, and the bulkheading of the Lady Tunnel apparently has no effect on them at all-- I mean on well K and Sunset well-- as far as we can discover from the testimony; and neither well K nor the Sunset well go up or down at the same times or in sym-

pathy with the Hellman well no. 2 or Lone Star no. 6, in many cases one week 40 feet, and the week after 50 feet difference between the two elevations; but that the well K and Sunset no. 1 are affected by the bulkheading of the Lone Star Tunnel. I have no doubt they are helped by bulkheading the Lone Star Tunnel.

Q. Which wells are those?

A. Well K of the Water Company and the Sunset well.

Q. Are there any figures here touching that subjectx, showing correspondence of the rise of the water in Well K, in the Sunset well, and the rise of the water in the lower Lone Star tunnel?

A. Yes, sir; it is shown by the figures here. We haven't got well K for over a year past now-- any record of well K. And Mr. Cousins tells me it is not practical to get at the elevation. But we have the Sunset well, and it shows the rise from the Sunset well as the water rises in the bulkhead, or as it is raised by the bulkhead.

Q. Can you specify some of the instances?

A. Yes, sir; on December 13, 1908, the Sunset well no. 1 is 1290.8 feet elevation, and on April 3, 1909, a little less than four months, it was 1307.6,-- a rise of 16 feet a and .8 (16.8) But the elevation was 40 feet in the shaft two weeks ago in the Lone Star Tunnel. And the water in the Lone Star Tunnel stands about 1372 or '2, and has affected as far back even as the Sunset well to a certain extent. But that same rise in the Sunset well does not seem to come instantly with the Lone Star. There is no agreement between the two. That is, to-day it stands 64 feet lower--

Q What date?

A Well, April 10. That is the last measurement. It stands 64 feet below the Lone Star No. 6-- the well at the head of the upper Lone Star Tunnel.

As to the relation the same day with the Hellman well no. 2, of course you can't judge that because it stands higher than Hellman no. 2 because the water is flowing out of the pipe. But until the water did begin to flow they were practically xx xxx xxxx xxxxx sympathetic.

Q Hellman well no. 2 does not rise above 1362.5?

A No, sir. It leaks out through the pipe before it gets out over the pipe in a good even flow

This table does give all the dates of the observations both of all the wells and of both bulkheads.

Mr. Britt: We ask that the tabulation and comparative elevations to which the witness has referred be copied into the record as illustrative of his evidence.

Mr. McKinley: If it is not offered in evidence, we object to it as incompetent--

Mr. Britt: It is offered in connection with the testimony of the witness.

Mr. McKinley: Objected to as irrelevant, immaterial and incompetent, and mere repetition of the testimony of the witness.

The Court: Overruled.

Mr. McKinley: Exception.

The following is a copy of said tabulation:

TABLE SHOWING WATER PLANE AT HELLMAN WELL NO. 2 (WEST END Y TUNNEL) CUCAMONGA WATER CO.'S WELL NO. 6 (WEST END LONE STAR TUNNEL NO.1), WELL K, AND SUNSET WATER CO.'S WELL 1, AS AFFECTED BY PUMPING OF WELL [illegible] EADY AND LONE STAR TUNNELS.

DATE		Hellman #2.	Lone Star #6.	K.	Sunset #1	Depth water Eady Tun.	Depth water Lone Star Tun.
1900							
Feb. 4	Water flowing	1363.5	1392.3	1324.0		0	0
1904							
Apr.11		1345.5		1288.5		0	0
June18		1341.8		[illegible]		0	0
July 9		1340.1		1287.6		0	0
Nov.18		1331.3		1281.9		0	0
1905							
Jan. 7		1329.2		[illegible]		0	10 #
Apr. 3		1337.7		[illegible]		0	24 #
June 3		1340.2		1301.8		0	26 #
July 8		1340.3		1292.3		0	10 #
Oct. 7		1334.9				0	0
Dec.29		1337.9		1291.8		0	12 #
1906							
Feb.24		1340.0		1297.5		0	18 #
Apr.10		1343.0	1343.8	1302.1	1301.5	0	20.8
May 19		1343.5		1301.6		0	26 #
Sep. 1		1344.3				0	0
Nov.24		1344.8				0	0
Dec.22		1345.8				0	10 #
1907							
Feb. 2		1347.8				0	10 #
May 6		1356.8				43.5	22 #
20		1359.3			1300.6	27.0	18 #
Aug.30		1361.5				21.0	6 #
Sept28		1358.8				14.6	0
Oct.19		1356.9				13.	0
Nov.26		1362.8				39.6	0

rest wells began pumping May 13-04.
st well pumped 16 days to May 16.
ar well began pumping May 20-04, 40 in.
st well pumped May 16 to Dec. 30-04.

ar well ceased pumping Jan. 7-05.
. wells ceased pumping Jan. 9-05.

ed in Lone Star Tunnel closed about Jan. 1

ar well began pumping May 20-05.

st wells pumped 30 days to June 1.
st wells pumped 145 days June to Nov.
s. wells began pumping Aug. 16-05.
s. wells ceased pumping Nov. 5-05.

ar well ceased pumping Nov. 15-05.

ar well began pumping May 11-06.

st wells pumped 166 days from June 5 to Nov.25-06.

o.'s well K began pumping June 30-06.

o.'s well K ceased pumping Oct. 21-06.

ar well ceased pumping Dec. 7-06.

el in Lady tunnel closed Jan. 29-07.

ar well began pumping May 10-07.

K began pumping June 26-07.

st wells pumped from May 23 to Oct. 17, 145 days.

s. wells began pumping Sept. 5-07.

s. wells ceased pumping Oct. 19-07.
ar well ceased pumping Oct. 1-07
K ceased pumping Oct.21-07.

s wells pumped Dec.4 to 26-07.

DATE		Hellman #2	Lone Star #6	E	Sunset #1	Depth water Eady Tun.	Depth water Lone Star Tun.
1908							
Jan. 1		1362.8				17.6	14 #
Feb.29	Water flowing	1364.6				56.1	20 #
Mar.20	Water flowing	1364.5		1297.1		57.5	22 #
Apr. 8	Water flowing	1364.5	1368.1	1302.2	1301.9	49.8	24
May 11	"	1364.5		1295.2		50.2	20 #
June20	Water flowing	1364.5				35.6	16 #
Jul.28	"	1364.5				27.6	10 #
Aug.29	"	1364.5				16.1	0
Oct.24		1359.6	1355.5		1287.1	5.5	0
Dec. 13		1360.2	1357.4		1290.8	34.0	8
1909							
Jan. 29		1361.1				50.2	24 #
Mar. 7	Water flowing	1364.5	1368.4		1303.8	55.0	34
Mar. 13	"	1364.5	1369.0		1304.5	54.0	35
Apr. 3	"	1364.5	1371.1		1307.6	55.5	40.4
10	"	1364.5	1371.9		1307.7	56.1	42.9

nset wells pumped from May 1 to Dec. 2, 106 days.

he Star well commenced pumping Apr. 15-08.

h street wells began pumping June 20-08.

l K began pumping June 3-08, and stopped
Nov. 5-08, pumped 106 days.

h street wells ceased pumping Nov. 22-08.

he Star well ceased pumping Dec. 1-08.

Q Have you any further collections of figures showing the relations of the wells with eachother and the tunnels and wells?

A I have one here, a small one-- This is not a tabulation of that same description.

Q Oh, no; this is a different thing and does not relate to to the same thing.

A That is all I have.

Q You mentioned something about an observation that you took at the top of the casing at Hellman Well No. 2, which is the well connecting with the west branch of the Y Tunnel.

A Yes, sir.

Q Here within a few days. And I understood you to state yesterday that you found it to be 1365.1 feet.

A That is what I made it from the tw0 granite bench marks which mark from one to the other, from the northeast and northwest corners of the 526 acre tract.

Q What do you know about the water flowing out from that wel into the Y Tunnel before it reaches that elevation?

A I know on March 1st, 1908, we have a measurement in evidence of 7.inches and some fraction of water flowing at the division box of the Y Tunnel, and on the day previous we have in evidence here from Mr. Trask that the elevation of the water is 1363.6. I might want to look at the page to be sure of it. It is in his list of elevations. February 29, 1908, Mr. Trask gives the elevation 1364.6, and practically at the same date there was 7.5 inches flowing out by the weir from that tunnel.

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Q From the same well?

A From the Y Tunnel, measured at the division box.

Q Well, that water comes from the well, doesn't it?

A Yes, sir.

Q So that the water flows out of the well at some indefinite but small distance below the top of the casing, according to this elevation?

A According to this elevation, it does.

Cross Examination

By Mr. McKinley:-

Mr. McKinley: Q Speaking of the Lady Tunnel, you say the tendency would be with it as with all tunnels, to fall off from year to year?

A I stated that. That is, all tunnels, unless there is some unknown reason.

Q What is the reason for that tendency?

A They drain out the soils surrounding them and the probable source of supply is drained out.

Q And they drain the area surrounding them?

A Naturally.

Q To what extent?

A I don't know that I have any exact extent, but they go further and further as time goes on; they reach out further.

Q And the tendency is to drain out everything that is in the waterplane which is in sympathy with the tunnel?

A I don't know as I would say drained out everything; but it would drain out some out of that that is in sympathy. That Lady Tunnel is an example.

Q They will continue to run as long as there is water which

is in sympathy with the strata there that they are in?

A As long as water can reach they will continue to run.

Q They will continue to run and drain out gradually a nd lessening the quantity?

A That is the usual rule. The water is probably replenished by rainfalls and percolations to a certain extent, but generally they fall off.

Q And they continue to run as long as the waters which are in sympathy with them continue to be in sympathyx and don't get below the plane of the tunnel--

A Not necessarily, because you might--

Q Become so low that the pressure would not be sufficient to force it out?

A That is right.

Q That is, the effect of the Y Tunnel on the water plane was to drain all the water that was in sympathy with it down to the point when the influence of the head would not be felt on the Y Tunnel?

A Yes.

Q And when it dried up it was an indication that the water plane around it had been brought to a position that it no longer exercised an influence?

A It would certainly indicate that the water plane above it was too low or hadn't enough pressure to force the water out.

Q And in the absence of other causes, the Y Tunnel would bring ~~thex~~ down the springs to an elevation so low that it would indicate that there was not sufficient head to bring water into theY Tunnel?

A To some extent it would affect the springsx, as shown by the measurements; but at the same time, the elevation of the floor of the Y Tunnel is above any water we have had for 8 or 9 years, coming out of the ground.

Q Are you of the opinion that the wells on the 90-acre tract put down by the Cucamonga Water Company affect the waters of the Y Tunnel and the Cucamonga Springs.

A I don't see why not.

Q I am asking you what your opinion is. Do they?

A I believe they do.

Q And the waters of well no. 6-- well no. 6, you say, also affects them. What about well no. 5?

A I can't see any sympathy between well no. 5 and well 6, because the water stands 50 feet higher in no. 6, and I don't see any sympathy between them.

Mr. Britt: Which well 5 are you referring to.?

A The well 5 at the head of the lower Lone Star.

Q The only development belonging to the Cucamonga Water Company which do not affect the Y Tunnel and Cucamonga Springs are the Lone Star Tunnel, well no. 5 and the wells on the 35-acre tract?

A Yes, sir.

Q And well K?

A Well K does not affect it. That is on the 60 -acre tract.

Q Is there any well on the 50-acre tract except well K?

A No, sir.

Q You referred to Mr. Finkle testifying that there was no barrier between the wells.

A I don't think I said so. I said that I thought Mr. Finkle testified that the Y Tunnel was in the same new alluvium that the 16th Street wells were; that it went through the new alluvium--

Q The Y Tunnel?

A No; I mean the Eddy Tunnel.

Q That the Eddy Tunnel was in the new alluvium?

A The upper 1500 feet of it.

Q You say that the 16th Street wells, being nearer to the Y Tunnel and the Cucamonga Springs, affect them more: Is it your opinion that distance is the controlling element in regard to the effect of these different wells and tunnels which you say affect the Cucamonga Springs and Y Tunnel?

A I think probably distance would be one of the elements, and the porosity of the strata would be another element.

Q Is distance a very important element.?

A It is, sir.

Q You spoke of there being no dike between the Cucamonga Springs and the 16th Street wells: Did you say that?

A I think the water from the 16th Street wells is the samebody of water that comes out at the springs. Whether it is forced through something or not, I don't know, but it is the same water.

Q Is it your opinion that there is any dike between the 16th Street wells and the Cucamonga Springs?

A There is some carrier that throws it to the surface, and consequently brings it out in the cienegas or springs. If not, it might be kept down 80 feet under ground.

Q Do you think theproduct of the 16th Street wells is in

any way affected by the existence of a dike there?

A I think the product is--

Q The product of the 16th Street wells-- is there a dike which produces a greater amount of water than if there was no dike? The fact that the water is found there in quantity, is it due to the existence of a dike?

A Certainly it is.

Q And also in the 16th Street wells you include the Haskell wells?

A Yes, sir.

Q How do you account for the greater production of the Haskell well? Has the dike any bearing on that?

A I don't think one way or the other especially. The Haskell wells are as good wells as any of the 8 wells.

Q Do you think there is anything in the formation there that affects the difference, if there be one, between them and the other 16th Street wells?

A I don't think there is enough greater product to call for any special difference between the two.

-o0o-

Here the Court takes a recess until two o'clock p. m.

---------o0o---------

Afternoon Session:-

Cross Examination of E. T. Wright, Resumed.

Mr McKinley, Q You stated that your reason for believing the Sunset, Hermosa, and Cucamonga wells, on the 35 acre tract, and Lone Star tunnel and well on the 60 acre tract were in a different plane of saturation, were because of the difference of elevation between those and the other wells; what rule do you follow in regard to that?

A I think where wells go up and down together, and seem to be somewhere near the same elevation, and when there is no other outside causes, that the probabilities are that they may be connected underground,- the probabilities are that way.

Q My question is upon what do you base the statement that wells are in a different plane of saturation, because they stand at a different elevation, that is that the water in them stands at a different elevation?

A I think the waterplane of the other wells is from 40 to 60 feet above the waterplane of the 35-acre track or well K and this well number 5 and number 6, have stood there for upwards of nine years now, only 700 feet apart, and when you draw out the tunnel or raise the tunnel bulkhead, it done seem to affect well number 6 of the Lone Star at all; but it seems to go up and down with the Hellman well number 2 or one of the Haskell wells.

Q Your opinion is that ~~opinionthat~~ those two wells close together, are in different strata, 6 and 5?

A They certainly don't seem to affect each other, as far as nine years past goes.

(Last question read to witness.),

A Certainly in strata that have not affected each other so far. That would mean different, I presume.

Q Don't you believe that wells 5 and 6 of the Lone Star Tunnel, are in different strata?

A Yes, sir; I do.

Q What is the nature of that strata in your opinion?

A I have not the slightest idea, except that it is strata that don't allow the water from well 6 to percolate freely towards well 5.

Q How in your opinion are the strata separated?

A My opinion is there is some material that does not let water percolate freely through it; it is running in a northwesterly direction, a continucation of the little Red Hill, between the Y tunnel and the 35 acre tract, and that extends to the north, and that the barrier, whatever it is is between those two wells.

Q Then your opinion is that there are separate strata existing in that Red Hill formation?

A Separate strata?

Q Separate strata?

A I have no doubt it comes in strata; the water percolates or works its way through in different strata.

Q Now, with reference to the 16th street wells and the area surrounding them, are you of the opinion that is a saturated mass, or there is strata running through that region?

A I think it is nearer a mass, possibly; put it that way, but as to being one solid mass I certainly don't think so.

Q You believe there are some separate strata running through those gravels at the 16th street wells?

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A I have no doubt of it at all; I think the logs of the wells so show.

Q You are of the opinion that the water from the 16th street wells would if not pumped go to the Eddy tunnel?

A Some of it

Q How does the water travel, in your opinion, from the bottom of the 16th street wells, to the wells in the Eddy tunnel?

A I presume it goes through gravels.

Q Through a saturated mass or in strata?

A It may be in strata.

Q Now, returning to this question as to the height at which the wellsstand, which we might describe as the Sunset series of wells, including all the ones I have mentioned over there furthest east, you base your opinions in regard to that upon the elevations given in the record?

A Entirely so. The Hermosa well is a higher elevation than the others, except it is a further distance off; it is a good ways north of base line.

Q Do you determine that matter by observed elevation, or by relative elevation, depending on the distance from the mountains?

A Both, would have some affect on it; I think the natural flow is from the mountains, and the elevation of a well a mile or half a mile nearer the mountains should be some higher than the well below it; and that may be the same body of water.

Q Those wells are not lower than all of the wells over on the other side?

A The only well that we have in the record in this case that is lower than that is the Old Settlers well.

Q On the west side I am speaking of, are all the elevations on the west side of the Red Hill, higher than the elevations at the Sunset and Old Settlers' wells, and those other wells?

A No, not when the Lady tunnel is opened.

Q How much lower is that?

A Well, it averages a good deal the same as the Sunset well and the Well K; the last 3 or 4 years that we have had any measurements, in that well it was from 1285 to 1307, which was last week; and the elevation of the Lady tunnel at the mouth is, 1272, and at the upper end 1295.

Q How much did you say those elevations varied in the Sunset well?

A I wouldn't want to state positively; I think about 20 feet - from 1280 and something to 1307. Well, K, the only high measurement of that is Mr Finkle's measurement of 1899 or 1900, when the well was 1324 feet.

Q The elevations in 1900, such as you had, were higher than at a subsequent period? They went down and then went up again?

A They went down and they are going up; it has not got up.

Q They are all going up?

A Yes, sir.

Q To what do you attribute that?

A To the effects of bulkheading the two tunnels, that is on the east side bulkheading the Lone Star tunnel and on the west side the Lady tunnel, and the effects of the rain-

fall the last four or five years.

Q My question was intended to be directed to the wells of the Sunset, Hermosa, and Cucamonga Water Company on the 30-acre tract, and 50 acre tract; to what do you attribute the ri rise of those wells?

A The bulkhead at the Lone Star tunnel is closed, so that practically there is no outlet to that water on the surface, or that you can see flowing; there are no springs draining or wells being pumped, or any other water being takenout of that area of that basin, and ofcourse the natural flow of the water coming in it will rise; the Hermosa water being poured in will assist some, and the bulkhead being stopped, keeping that from escaping.

Q When was that bulkhead put in?

A In 1905.

Q In the Lone Star tunnel?

A Yes, sir; that is the testimony here; I didn't know it until I heard it here; in 1905 I knew it was in, but in 1904 I didn't know anything about it.

Q To what do you attribute the fall of the waterplane in the Sunset group?

A Pumping and draining out water in excess of the supply.

Q Practically, in other words, to the falling off of the supply?

A Yes, sir.

Q Whence is the supply of all these wells and tunnels around the Red Hills?

Mr Britt: Objected to as not cross examination.

The Court: Overruled.

Mr Britt: Exception.

A Why the rainfall is the source of supply.

Q From where, with reference to the mountains does the principal supply come?

A To what wells?

Q To all of the wells there? In other words, I will ask you a more leading question: the watershed of those different canyons along the foothills, extending from the San Antonio to Day Canyon, furnishes the supply for the region, in which these various wells are situated, all of them in the neighborhood of the Red Hills?

A Yes, sir; tat is what would be called the actual watershed; there is some space between the mouths of the canyons that would help it some.

Q Do you believe that the source of supply of the Sunset group of wells, is different from the source of supply of the other wells, as to an entire region?

Mr Britt: Objected to as indefinite.

Mr McKinley: I withdraw the question.

Q Now, taking the group of wells, which you say are on a lower plane. and not connected in your opinion with the water sources on plaintiff's land, and wells of the San Antonio Water Company, and the wells at the Cadie tunnel and connecting with it, do you believe that the water which is taken from those two groups is of uncommon origin, or that there is a place where it is all together, and that there is a dividing of it?

A A very small portion, I would think; I would think that most o the water comes from the west side of the Deer Canyon;

[illegible]

Q. [illegible] wells [illegible]

[illegible]

[illegible]

A. [illegible] wells.

Q. [illegible] of the wells [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Q. [illegible]

[illegible]

[illegible]

Q. [illegible] that the source of supply of the [illegible] group of wells, is different from the source of supply of the [illegible] wells, as to quantity and [illegible]

MR. [illegible]: [illegible]

[illegible]

Q. Now, [illegible] the [illegible] of wells which you say are in [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] together, [illegible]

[illegible]

Q. [illegible]

[illegible]

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that is my belief at least.

Q That is the water from the group of wells on the lower plane, comes from the Deer Canyon?

A The majority of it I think.

Q Where do you think the Day Canyon water goes to?

A I don't think any of it comes into that basin at all.

Q Which of the wells does the water of the Cucamonga Canyon feed, I mean the water coming down the Cucamonga Canyon from the Cucamonga watershed?

A I think that is the supply, almost all of the supply of the Cucamonga Springs, the Y tunnel, the Macy tunnel, and the 16th street wells.

Q In your opinion how soon after a rainfall on that Cucamonga shed is its effect felt by the Cucamonga Springs, and the Y tunnel?

A We always noticed it some the first year afterwards, but the second year we felt we could stand a dry year, and still have a water-supply, because the water supply was a good supply, as we call it.

Q In other words, the most of the effect of a heavy rainfall is not felt during the next irrigating season, but the next year after that?

A I don't think most of it, but certainly a good share of it.

Q Are you of the opinion that water travels from the Cucamonga watershed, to the Cucamonga Springs and Y tunnel during the same season that it falls?

A I would suppose not.

Q About how long do you think it takes it to travel?

A I have no measurements to base an opinion on.

Q Now, you say that the effect of pumping the 16th street wells in your opinion, is felt on the Sadie tunnel and the wells surrounding it, in from 30 to 60 days?

A It certainly shows sooner than that in the Hellman well number 2.

Q I haven't asked you anything about that; I have asked you about the Sadie tunnel: How soon in your opinion does that pumping make itself felt, upon Hellman well number 2 and the Y tunnel?

A I would rather refer to the tables and look up the times, because they show for themselves.

Q From those tables, what conclusion have you arrived at, as to the length of time it requires for that pumping to affect the Y tunnel and the Cucamonga Springs - about what length of time?

A I had better look at the table of elevations, because I conclude that is affecting the Y tunnel when it lowers the Hellman well number 2; when it lowers that without any other apparent cause, I attribute that to the pumping of the 16th street wells; it looks so to me.

Q Well, look at your table or anything else you may want to.

A Take the year, for instance, 1904; I see the pumping began in the Haskell well number 2, or well number 6 as it is called here, on Mayx 19th, and the very next measurement of the Hellman well, which is made on the 26th of May, even showed a decline, of a foot or something over; whereas the week before it had risen.

Q Well, then, answer my question: how long do you think it takes?

A It apparently shows between those two wells within a week.

Q In your opinion the pumping of the Haskell well within a week affects the Hellman well number 2?

A It shows by the records that way.

Q Within what length of time, in your opinion, do the other 16th street wells other than the Haskell wells, taking numbers 1 to 5, affect the Y tunnel?

A I would have to look up something - I don't think they affect it as quick; it is a further distance.

Q You are not able to give an opinion as to that now?

A I would rather look it up when the Haskell well was not pumping, because that is nearer both in distance and in sympathy, possibly, than any of the others.

Q Is the pumping of the Haskell well the only factor in your opinion that affects the elevation of Hellman well number 2?

A No, sir.

Q Now, without the additional factors, can you determine the length of time within which the pumping of the Haskell well affects the Hellman well number 2?

A It is the only other well that affects it as soon as that, and when the Lone Star well 6 is pumping all season, right straight through, and the Haskell well not pumping, it has a continuous rising the whole season.

Q Do you state that as a fact or on the evidence in this record?

A I state that as a fact from the evidence in the record as made here.

Q Do you think that is justified by Exhibit 78, which you put in, showing that the Y tunnel fell from May 18 to about the middle of July, before the other wells began pumping, when the Lone Star well was pumping?

A The fall is very slight; I think it did fall some; those are the figures on the profile; I was referring to the year 1906 when the Haskell well was not pumped, or any other wells that season, and the Lone Star Well was pumped.

Q How much did the discharge of the Y tunnel come to in that season of 1906?

A It did not discharge at all; it was below the surace.

Q How much did the elevation rise in Hellman well number 2?

A I think there was a few tenths of a foot the fore part of the season; but every measurement that was taken was higher than the preceding one, I think, by a tenth of a foot or so; it practically held its own during the Fall and Summer season.

Q That was the effect produced by the cutting off of the pumping of several hundred inches of water by the San Antonio Water Company, that rise of a few tenths of a foot?

A That is the effect of the season, when ordinarily the water falls somewhat in that season, but that summer it did not fall, because the pumping had ceased; the tunnel or the Springs or Lone Star number 6 did not draw it out quite as fast as the quantity that flowed in.

Q The preceding season there has been a very heavy rainfall?

A It had been a good year.

Q And the year before that there had been a good rainfall?

A Yes, sir.

Q All the conclusions that you have given from these tables, are based upon matters which are in the record, and not on anything that you know outside?

A Nothing else but the records.

Mr Britt, Q Shortly before the adjournment at noon Judge McKinley inquired of you about the effect of the Y tunnel and the Cucamonga Springs, and in depleting the source of supply which feeds the Y tunnel, whatever it is; do you believe that the Y tunnel exhausted the source of supply which originally fed the cienega in which it was placed, and which fed, first, the Y tunnel when it was constructed, so that no more water would have flowed in that tunnel, whether there were abstractions from the waterplane by means of pumping, or other extraneous influences, or not?

A That is a long question. I would say no, if I could go on and explain it.

Q Well, why not?

A Well, the Y tunnel, I stated in answer to Judge McKinley's question, affected the cienegas, and that the best proof we have of that is the old measurements made when the Y tunnel was first built, that the cienegas fell off, and the Y tunnel increased, showing that probably it tapped some of the supplies of the water of the cienegas,- hardly a doubt of it. The aggregate of these measurements was increased, the aggregate of the two, until the tunnel had undoubtedly drained off the surface water, as the tunnel is only in 42 feet below the surface at the upper end of the tunnel, and

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is practically a surface tunnel; and the first one or two years it would flow a great deal more than the next one or two years afterwards, and it undoubtedly drained off a little of that water that heretofore had been flowing down toward the cienega above the surface there; but the aggregate of the two might have been increased for one or two years; it would then settle back, without other influences, to what it had been heretofore, the aggregate of the two measurements, the Y tunnel and the cienegas.

Q Was there any reason, after the construction of the tunnel why the tunnel should not have continued to discharge as much water as thecienegas did before the tunnel was constructed?

A Nothing, except it was draining off the upper portion of it, and it would add that much more for the first few years, and then would settle down to the supply that was coming into that tract of land; a tunnel will always drain off more the first two or three years than it will later; but if the supply continues the same from above, it will come out from the tunnel or cienega or springs, as heretofore.

Q Do you infer from the fact that there was an extensive cienega in the neighborhood of which the Y tunnel was situated, that there was a perennial supply there?

A I know there was, because I have known the cienegaxfor so many years; there was 60 and some odd inches running from that cienega, below the mouth of the Y tunnel, before the first developments were made in 1887.

Q Then that quantity, at any rate, should have continued

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to flow from the Y tunnel, if there had been no artificial diversions from the source of supply elsewhere?

A Y'es, sir; but we never completely dried up the cienega with the Y tunnel, until the Y tunnel ceased flowing; until the Hellman well went down below the flowing point those cienegas never dried up.

The Court, Q Do you think the Hellman well had something to do with the drying up of the cienegas?

A Certainly it did; when it got down so low that it didn't come out of the Hellman well, it stopped in the cienegas, too. the cienegas are below the mouth of the tunnel, and below the level of the Hellman well, and that is why they did not cease entirely, until the tunnel itself stopped flowing, until it got down below the level; thesurface of the whole waterplane got too low, to force it out there.

Mr Britt, Q Suppose the tunnel having been driven, and the well number 2 at the head of the west branch of the tunnel having been sunk, and the well merely permitted to flow into the tunnel what would rise there by gravity, do you think that would have destroyed the cienegas, and the Springs rising in the cienegas, merely the flow of water from the well the natural gravity flow?

A No; it might have affected them some, even if the cienegas were a little below it, but the total quantity would have been increased,- the total product would have been increased.

Q I understood you to say that your opinion as to the differencein the elevation of water in the wells K, Sunset wells, perhaps the Old Settlers well, and the Hermosa well, and may be some of those in the 35 acre tract, and the

elevation of the water in the Hellman well number 2, and the 16th street wells of the San Antonio Water Company, that your opinion as to that difference was founded entirely ,- I think that was the word used - entirely,- on measurements of elevations given here in the record: I inquire of you whether you have not examined the lay of the land there and that very frequently?

A Yes, sir; and I would like to say another thing; I didn't mean to say entirely; I want to mention the quantity of water that you can derive from either of those wells, either the Sunset well, or Well K, or the 35 acre tract wells,- that quantity is a small amount compared to what you can takeout of any of the 16th street wells, or even out of Lone Star number 6; and the Hellman well number 2 has not been pumped with any test pump to know what you can do there.

Q Now, have you observed the strong declivity in the surface of the ground?

A The elevations on the profile show that; the contour lines show how much lower the ground actually is.

Q Lower where?

A Around well K or the Sunset well, or the wells of the 35 acre tract than even at the 16th street wells, or Lone Star number 6, or Hellman number 2; there is a ridge between running a little west of north, easterly of the Red Hills, and which reaches up further to the north before it goes out so that you don't notice it,- probably a thousand or two thousand feet from Base Line, is where you lose the sign of a ridge.

Q Those wells which I first enumeratedin asking you about

the ground, and as to which you expressed an opinion as to the difference in elevation between them and certain others, they are situated in a marked surface depression?

A Yes, sir; with the possible exception of the Lone Star Well Number 5, which althoughx it is lower by some 20 feet than number 6, but it is xx not as much lower as the balance of them.

Q That well, however, is some 500 feet deep?

A It is a little over 500 feet.

Redirect Examination.

Mr Goodcell, Q You spoke about the boring of the two Cucamonga Water Company wells, close to the Cady tunnel, and the connecting of those wells into the Cady tunnel, in 1904: have you any memoranda, by which you can fix the date at which the final connection was made between those wells, or either of them, and the tunnels, the latest connection?

A I have a memorandum of the latest connection that I made of the last well, of the most easterly well of the two, and the other was connected sometime prior, about February 25, 1904, and the connection was actually made within two or three days; my notes are, one foot from the tunnel and closing in.

Q Had the other well been connected with the tunnel prior to that time?

A Sometime before that; how long before I couldn't say; it was done sometime before I got to going out so often in 1904; it was made a good many months; how many I don't know.

Q Had any connection been made between those wells and the tunnel by a siphon before that?

A Yes, sir; I think for upwards - I don't know for how many months, but a good many months; water had been flowing into the tunnel by siphon from the last well, and the first well was siphoned, if I remember right, within a year prior to that, the last well I have notes of its being of its being siphoned.

Q And the other well which was cut in, which was first to be cut in, had also been siphoned into the tunnel, before that well was cut in?

A I don't think I would dare to state that, as a fact, of my own knowledge.

Q That is the way I understood you to state it.

A I understand it is so; I don't know that I could testify to it; I have no notes to that effect, and I don't feel sure about it.

Q Can you state the quantity of water that flowed from either of those wells before they were cut into the tunnel?

A I have a note here, February 4, 1904, total water from the two wells of the Cucamonga Water Company, tunnel,number 6 being siphoned, from the last well, is 77.87 inches

Q That was the flow from the two wells?

A That was the flow from the two wells.

Q Do you know what proportion of that water came from each well?

A I have no record to tell.

Q As I understand you, one of the wells, the one nearest to the tunnel, had already been cut down, and connected with the tunnel sometime before?

A Sometime before.

Q Do you know which of those two wells was the more productive of the two?

A I believe I know but I couldn't testify to it, because I haven't got any measurements to back up my testimony.

Q Did you make any measurement of the discharge from either well, separate from the other?

A No, sir.

Recross Examination.

Mr Joliffe, Q How long has it been since you formed the opinion that the waters at the Sadie tunnel, affected the Cucamonga Springs?

A I presume it has been since they commenced this case that I have been convinced of it in my mind.

Q You say since you have been convinced of it: You did have the opinion before the commencement of this case?

A I didn't know, because I hadn't had occasion to look it up very much; and the old Sadie tunnel as I knew it, when I had considerable to do with it, petered out at the end of three or four years; that is it ran down to three or four inches, and probably had not affected things very much.

Q You say the Sadie tunnel had petered out so that it then flowed only a small quantity of water?

A Yes, sir.

Q And you don't think up to the time it petered out, that it had affected them **materially**, had not affected the Cucamonga Springs materially, until the time the Sady tunnel was exhausted or nearly so?

A I don't think it affected them materially, because the highest measurement we ever had was only 75 or 80 inches flow

from there, so it couldn't have affected them materially.

Q You say you didn't know it: when did you first form an opinion that the Sadie tunnel affected the Cucamonga Springs?

A At the same time when I found that the water was so nearly exhausted on the east side, and the immense amount of water pouring out from the west side.

Q You didn't have any opinion concerning it prior to that time?

A I had an opinion some nine or ten years ago, that they were not connected, before I had as much experience as I have now.

Q This is a recent opinion you have formed now?

A Not within the past four years, no; not so very recent.

Q When did you first form the opinion that well number 4, sometime spoken of as the '96 well, affected the Cucamonga Springs?

A I presume I formed that at the same time I did all the wells; I don't refer to the tunnel itself as a tunnel, because it wouldn't affect it so much aside from the flow of all the wells combined; it is the quantity that has the effect on the basin.

Q You did not form any opinion concerning the abstraction of water from the well number 4, affecting the cienega, in 1896?

A I certainly remember thinking very positively, that they were not connected, nine or ten years ago.

Q In 1896, you didn't then?

A No, sir; I didn't think so; I hadn't had the time to have the experience to see the effects.

Q You say that the Eady tunnel became nearly exhausted: Is that the tendency of all tunnels, after they have run a while, to peter out?

A My experience is, they need not peter out, but they lessen their quantity, ~~largely~~ usually.

Q And very materially so?

A Very materially, unless there is some special good supply coming in regularly, which is not usual.

Q Is there any reason why the Y tunnel should not have followed that general rule?

A No reason why it should not follow the general rule, from the surface flow at all, but what it would lower, which it gradually did, until those two wells were put in in 1902.

Mr Britt, Q You stated that you thought there was no water from the Day Canyon coming over to supply the wells and tunnels, as to which you have been inquired about:. I would like to know what you think about any water from the San Antonio watershed reaching over there, and furnishing any of the supply for the ~~1th~~ 10th street wells, and the Eadie tunnel and the Y tunnel, and the wells?

A I don't think there is any of that water from San Antonio water shed that reaches there above Base Line to help us, unless it is taken out artificially and brought in above there; not from the natural flow from the stream itself.

Redirect Examination.

Mr Goodcell, Q You have spoken about the cutting in of the two wells of the Cucamonga Water Company into the Eady tunnel: That was prior in time to the connection of the tunnel with the well number 14, was it not?

A No, sir; well number 14 was cut in, my notes show, the 19th day of February, 1904, and the last of the Cucamonga wells was cut in sometime between that and the first of March., in the same month.

Q Now, if I understand, at the time the well 14 was finally cut into the tunnel if I have understood your testimony, one of the Cucamonga wells had been cut into the tunnel, and the other was discharged into the tunnel by a siphon?

A By a siphon; yes, sir.

Q What did you observe, if anything, after the cutting in of well number 14, as to any change in the quantity of flow from the two Cucamonga Company wells?

A The record of measurements would show all that, and noted that, which I read this morning; it gradually ran down, the flow ran down, well number 14, or rather the output over the cement shaft A, decreased from 85 to 35 inches, when they cut it in, because it had been pumping so heretofore in order to make the connection; when they got the natural gravity flow, the output of both wells 14 and the Cucamonga wells decreased all along, all through that summer.

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B. J. Caldwell

B J. CALDWELL, previously sworn, being recalled by defendant, Cucamonga Water Company, testified as follows:

Direct Examination.

Mr Goodcell, Q The other day you gave us an estimate of the number of acres supplied with water for irrigation by the Cucamonga Water Company?

A Yes, sir.

Q And in that statement of acreage did you include the lands that are irrigated, by what are known as the old Settlers Water Company?

A No, sir.

Q Do you include the lands in what are known as Class B?

A No, sir.

Q Can you state about what quantity of water, if any is used for domestic purposes that is supplied for domestic purposes by the Cucamonga Water Company, independent of what is supplied for irrigation purposes?

A About 29 inches continuous flow.

Q During the time that you have been zanjero, during what portion of that time if any, have you had sufficient water to distribute it in full heads of thirty inches each?

A About one month.

Q Aabout what quantity has been distributed at other times, about what sized heads?

A 20 inch heads.

Q And the full head would amount to how much per acre?

A Thirty inch.

Q That would be one inch to how many acres of land?

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A That would be one inch to ten acres.

Mr Curtis, Q You say you did not include in that estimate the lands covered by the Class B: Did you include in that estimate the lands covered by the Sunset wells, or the Sunset Water Company?

A No, sir.

Mr McKinley, Q The lands of those who are in the Sunset Company are either lands in the Class B, or in the Old Settlers?

A I can't state that; I don't know.

Q You know that a great many of them are don't you?

A No, I so not.

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S. G. COUSINS

S G. Cousins, previously sworn, being recalled by defendant Cucamonga Water Company, testified as follows:

Direct Examination.

Mr Goodcell, Q Did you take any measurements of water or elevations of water last Sunday in the Cucamonga section?

A Yes, sir.

Q Have you a memorandum of those measurements?

A Yes, sir.

Q I wish you would give them to us.

A April 18, 1909, well number 5 of the San Antonio Water Company, was 96.7 feet below the top of the curb, giving an elevation of 1382.62.

Well number 7 of the San Antonio Water Company, the same date, water was 84.9 feet below top of curbing, giving an elevation of 1376.9

Well number 6 of the Cucamonga Water Company, same date,

water 86.1 feet below top of curbing, giving an elevation of 1372.72; Sunset Water Company, well number 1, same date, water 83.9 feet below top of curbing, giving an elevation of 1308.6 feet.

Well E of the Cucamonga Water Company - that is the elevation of water in the lower Lone Star tunnel, the same date, water stood 53.9 feet below top of pipe, giving an elevation of 1385.2 feet. That is the wrong figure I have read there; that should be 1332.9. That is all the elevations.

Q What was the date on which those measurements were taken?

A Sunday, April 18, 1909.

Cross Examination.

Mr Britt, Q Do you know to what extent if any the water in the well E was raised by the effect of the bulkhead in the lower Lone Star tunnel, at the time you measured it the other day?

A The water as measured at well E, is the water in the lower Lone Star tunnel.

Q This 1332.9 feet, is how much above the floor of the tunnel?

A I don't know exactly.

Q You have given a good many measurements of water here, depth of water in wells, and usually in feet and tenths of a foot: what is the liability to error, in attempting to make measurements of the height of water in wells, to as nice a fraction as a tenth of a foot?

A By using a steel tape, with a stick tied on the end of it and a good heavy weight, and being very careful, after having had considerable experience, you can measure it within

a tenth of a foot.

Q If all those things concur?

A Yes, sir.

The Court, Q Did they concur in your case?

A At the first measurements, probably some measurements might be half a foot out, but after I had made a few of them I began to get experience, and I think they are all pretty accurate as far as depths go, from the top of the curbing to the water.

Mr McKinley, Q These elevations are based on the datum plane that you used yourself?

A Yes, sir.

Q The same as your other measurements?

A Yes, sir.

Mr Haskell, Q Did you measure the distance from the 16th street wells to where water is found rising in the Cucamonga Springs?

Mr. McKinley: That is objected to as not proper cross examination.

Mr Haskell: There are about half a dozen questions that I would like to ask of this witness in rebuttal at this time.

The Court: If the objection is made, it will be sustained.

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F. A. LUCAS

F. A. Lucas, a witness called by defendant Cucamonga Water Company, being first duly sworn, testified as follows:

Direct Examination.

Mr Goodcell, Q Where do you reside?

A In Cucamonga.

Q How long have you lived there?

A Nearly ten years.

Q What business have you been engaged in there if any?

A In ranching, principally. Engaged in the mercantile business also.

Q What kind of ranching?

A Raising of fruits, both deciduous and oranges.

Q What acreage have you had planted to fruits?

A My individual interest, together with what I am interested in with my family, we have now 590 acres; this is not quite all improved; thereis about 50,acres that is not improved.

Q State if you can, the acreage in each variety of fruit, that is in each class?

A There is grapes and peaches - -

Q The acreage that you have had in citrus fruits and in deciduous fruits and vines?

A Well, we have 6 acres in oranges; 180 acres in peaches and apricots; and 340 acres in grapes.

Q What has been your relation to that acreage, as to having anything to do with the managing and irrigating of it?

A Well, I live on the ranch, ~~xxxxxxx~~ right in among the trees and I see the work done, and I have to see as to how it should

be done and when.

Q What interest have you in it?

A I have my individual property, and one of the directors in the ranch property; part of our property is owned by a corporation, and I have stock in thecorporation.

Q What proportion of the acreage planted to citrus fruit has been irrigated?

A We irrigate all our citrus fruit.

Q What is the age of the trees of the citrus fruit?

A Any part of it is ~~x~~ eight years old, and part seven.

Q What quantity of water has been used in the irrigation of the citrus fruit per acre?

Mr McKinley: Objected to as incompetent; I do not understand that in direct examination it is competent to go into specific instances.

Mr Goodcell, Q From what source has water been derived for the irrigation of the lands you mentioned?

A From the Cucamonga Water Company.

Mr McKinley: I still object to it; I don't think it is competent for the reason stated.

The Court: I am inclined to think it is some evidence as to what was the amount required; objection overruled.

Mr McKinley: Exception.

A We have used one head of water on the six acres.

Q And one head of water has been how much water?

A Well, that has varied at different times; it is supposed to be an inch continuous flow, but we have not had that much water.

Q And how long have you had any experience in the handling of that citrus orchard, in the way of irrigating and

cultivating it or seeing it done?

A Sinceit was planted.

Q State whether in your opinion, the quantity of water that you have actually had and used for the irrigation of that orchard has been a sufficient quantity?

A Yes, sir; I think so; we have used the water that we have with ten acres to put on the six, and I think it was sufficient.

Q State whether or not in the irrigation of that orchard, there has been used upon it more water than was necessary for the proper growth of the trees?

A No, sir.

Q Have the lands planted to deciduous fruits been irrigated.

A Part of them.

Q What acreage of the deciduous fruits have been irrigated and what acreage not irrigated? Take the peaches first?

A I thought I had a memorandum of it but I don't see it now; on our deciduous fruit, we put water on all of it, with the exception of 40 acres; but we put water on some of the orchards part of the time.

Q Are ~~xxy~~ there any portions of the orchards you have irrigated regularly every year?

A Yes, sir.

Q And some that you have not irrigated at all?

A Yes, sir.

Q During what numberof years and for what length of time has that condition continued? That is how long have you been raising the one portion with irrigation, and how long have you been raising the other portion without irrigation?

A Why I think about six years.

Q How did the two parts, the irrigated portion, and the non-irrigated portion, compare, as to character of soil, and the care and attention given to them in the way of cultivation?

A The care and attention is about the same; the soil does not differ a great deal; possobly it is just a trifle lighter on top on what we call our dry ranch, but the subsoil I think is exactly the same.

Q Now, as between the deciduous fruits that have been irrigated regularly, and the deciduous fruits that have not been irrigated, how have those two portions compared in the way of production and quality?

Mr McKinley: Objected to as immaterial and incompetent.

The Court: What is the ground of incompetency?

Mr McKinley: The same as the other objection; specific instances cannot be shown.

The Court: Objection overruled.

Mr McKinley: Exception.

A We find that te irrigated orchards produce a ~~gxxxx~~ great deal more - just about double.

Q Can you state about the quantity of fruit per acre produced on each kind?

A Well, our dry ranch averages about two and a half for different varieties -

Q Two and a half what?

A Tons per acre, on an average for different years, of different kinds of fruit; ~~ourxx~~ irrigated orchards produce on an average of about five tons per acre. That is in peaches.

Q How do those two classes, irrigated and non-irrigated orchards compare in the size and age of the trees?

A Well, they arevery near the same,- full-grown trees.

Q Have those trees been in full bearing during the whole six years?

A Yes, I would consider so.

Q And you say the quantities you have given at present relate to peaches?

A Yes, sir.

The Court, Q How does the fruit compare in quality?

A The quality does not differ a great deal; the size of the fruit on an irrigated orchard can be brought up to size suitable for canning, and get more money for it than from a dry orchard; in the average crop, one can get a better size on an irrigated orchard, and get more money.

Q Per ton?

A Per ton.

Mr Goodcell, Q Have you raised apricots on irrigated and on nonirrigated land?

A No, sir; we have no apricots except on irrigated land; that is none that is in bearing.

Q Now, about your vineyard: Has that all been irrigated, or all without irrigation?

A No, sir; just a part.

Q What porportion of it has been irrigated, and what has been without irrigation?

A We have only about ten acres of vineyard that we put water on steadily, and we haven't put that on quite all the time; then we have some that we have put water on occasionally

and some that we have never put any on.

Q What have you observed as to the difference in productiveness of your vineyards, as between thoseportions that have been irrigated regularly, and those that have been irrigated occasionally, and those that have not been irrigated at all?

Mr McKinley: Objected to as incompetent, and calling for specific instances, and irrelevant and immaterial.

The Court: Overruled.

Mr McKinley: Exception.

A I figure that we raise about two and a half tons of grapes per acre for different kinds, during an average year on land not irrigated, while it would run about four tons on land that would be irrigated; that is it would run in that proportion; we have had as high as eight tons on nonirrigated land, and as high as twelve on irrigated land; but two and a halfto four would be about the proper ratio as our crops have turned out.

Q How do those different portions compare as to quality of land?

A There is nothing materially different in the character of the soil.

Q How do they compare as to care and cultivation that has been given them?

A The same care and cultivation.

Q And as to the age of the vines?

A About the same age.

Q Are they the same or different qualities?

A Well, we have some the same varieties.

Q Does the proportion that you have stated as between the irrigated and the non irrigated land hold good as to the acreage planted with the same variety of vines?

A Yes, sir. There is a difference in the age of the vines, too; as vines grow older the relative difference in productiveness would be greater each year; as a vine grows older it will produce results greater in proportion to the amount of water it gets; there is not so much difference on young vineyard.

Q You state that from your own observation and experience?

A Yes, sir.

Q State whether or not all the water that has been received from the Cucamonga Water Company by you and the parties interested with you during the time that you refer to, has been used for irrigation on the lands that you mention?

A It has.

Q Now, some of these lands have not been irrigated, and some of them have been irrigated you say only occasionally: What has been the reason for not irrigating all of the lands?

Mr McKinley: Objected to as incompetent and calling for a conclusion of the witness.

The Court: Sustained.

Q Would the lands that were not irrigated have been irrigated, if you had sufficient water for their irrigation?

Mr McKinley: Objected to as calling for a conclusion of the witness and cinompetent.

The Court: Sustained.

Q State whether or not the water that was used for irrigation of portions of your land, was more than sufficient for

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the irrigation of the lands upon which that water was actually used?

A No, it was not.

Q Did you have any surplus of water after irrigating those lands that were irrigated with which you could have irrigated other portions of your land, had you desired to do so?

A No, sir.

Q Can you state from your experience, whether the portions of the lands not irrigated would have been more productive and more profitable, if they had been irrigated?

A Yes, sir.

Q Would they have been more productive?

A Yes, sir.

Q Why were they not irrigated so as to give you the benefit of that increased production?

Mr McKinley: ,Objected to as calling forthe conclusion of the witness.

The Court: I think I will overrule that objection to save time.

Mr McKinley: Exception.

A We did not have enough water; that is I mean by that that we didn't get full heads of water.

The Court, Q Do you mean if you had full heads you would have had enough?

A We would have irrigated some of the lands that we don't irrigate.

Q Would you have been able to irrigate all of them?

A No, sir.

Q Are you acquainted generally with the lands that are

supplied with water by the Cucamonga Water Company?

A Yes, sir.

Q How do the lands about which you have testified of your own, and lands in which you are interested, compare in quanity and situation with the lands generally that are supplied with water by the Cucamonga Water Company?

A! They are about the same.

Cross Examination

Mr Britt, Q Did you take any note in the course of your experience in this locality of a vineyard called the Cucamonga vineyard?

Mr Mckinley: Objected to as immaterial and not cross examination.

Mr Goodcell: There is one question that I omitted to ask this witness.

Reidrect Examination.

Mr Goodcell, Q You have given the number of acres that you had: How much water did you receive from the Cucamonga Water Company, that is what amount of water did you have per acre, during the times you mention?

A Well, what we consider our irrigated lands, most of that we have one share per acre; we use more on some; on my home place I use the water I get on 25 shares on 20 acres; I have some extra water for that land.

Q In your own experience then and observation, what quantity of water would be required per acre, for the proper irrigation of citrus fruits, say the age of your orchards, eight to ten years?

A One inch continuous flow to eight to ten acres. I under-

stood that question to apply to deciduous fruits.

Q No, citrus was the question?

A We use ten shares on six acres of citrus fruits, and I consider that about the right amount.

Q That would be an inch to how many acres?

A Well, it is supposed to be one inch continuous flow for ten acres; we use the water for ten acres on six acres; part of the balance of the ten acres is not planted, and part is a couple of acres of grapes, that we have not used the water on yet, and we use the water on the oranges.

Q I am asking you from your experience and observation there, what quantity of water is necessary for the proper irrigation of citrus fruits?

A About one inch continuous flow for six acres.

Q About what quantity of water would you say would be necessary for the irrigation of peaches?

A About one inch continuous flow for nine acres.

Q And apricots?

A I think apricots need just a little more than peaches.

Q And vines?

A About one inch continuous flow for ten acres.

Mr Goodcell: That is all.

Mr McKinley: Defendant withdraws its objection to Mr Britt's question.

Cross Examination.

Mr Britt, Q Those grapes which you have been growing yourself, compared in point of quality among themselves, in what way, as between the irrigated and non-irrigated vineyards?

A Well, I would say the quality was a little better on

the irrigated vineyards, especially for some purposes.

Q How far are your vineyards from the vineyard called the Cucamonga Vineyard, the old Cucamonga Vineyard in the neighborhood of the winery - you know where it is?

A Yes, sir.

Q How far away?

A We have some within a mile.

Q You are east are you of the Cucamonga Vineyard?

A Southeast.

The Court, Q You say better for some purposes - what do you mean by that?

A Well, if they were Muscat grapes for instance, the grapes will get larger where they are irrigated; if they are to be used for table grapes or for making raisins of, they would be worth more, because the size would add to their value.

Q How about other purposes?

A Well, they would a little bit for wine purposes, because they would turn out a little bit better in gallons per tonnage

Q Would the seller be getting a larger price per ton, according to the saccharine test?

A We have never sold by saccharine test yet, although we expect to; the wineries throughout the State are requiring that test, and we expect to hereafter, and I have never sold any of ours on that test.

Q Are you prepared to say whether grapes raised without water would have a larger percentage of sugar, without water, than if raised with water?

A I don't think there would be any particular difference;

the tests out there show they are about the same.

Mr McKinley, Q Your water right is in the shares of stock of the Cucamonga Water Company?

A Yes, sir.

Q How many shares of stock have you?

A We have 160 shares.

Q And you said you had 524 acres of land?

A We have 540.

Q How frequently do you irrigate your vineyard, on your portion where you use the most water?

A Oncea month.

Q Beginning when?

A About July, usually.

Q How many months do you continue to irrigate?

A Until the winter rains begin.

Q Do you do that regularly with your personal vineyard?

A Yes, sir.

Q How many acres?

A We have only ten acres that we irrigate regularly.

Q What sort of grapes are those?

A Muscats.

Q Raisin grapes?

A Yes, sir.

Q Now, referring as to the next portion, as to which there is a different rule of irrigation: what irrigation do you give that portion of the vineyard?

A Well, we have not been giving them very much the last two years; that vineyard we have only had, I think we have had that about three years.

Q How much water have you given it during the last three years?

A I don't remember whether we have put water on there more than once during the season; I couldn't say about that for sure.

Q What time in the season do you put it on?

A I don't remember exactly, but I think it would be a short time before we would pick the grapes.

Q Now, with regard to your ranch, your oranges, you use about one inch to six acres?

A We use ten shares to that; that is not equivalent to an inch, quite.

Q Have you ever observed that the crops of oranges are dependent upon the quantity of water and fertilization?

A I think so.

Q And that the crop is very much improved by increasing the amount of water?

A Well, up to a certain point.

Q Doesn't that want to run higher than an inch to six acres for orchards in full bearing?

A Well, it has been sufficient,- what water we have put on ours, it has been sufficient; it is not what you call in full bearing.

Q Could you not have had a bigger crop if you put more water on?

A No, I don't think so.

Q Have you not observed that where the oranges were the most thoroughly irrigated, the product was the greatest, or have you observed the orange business particularly?

A Yes, sir; I noticed it some; well, I think up to a certain point, you can.

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Mr Goodcell: Now, with the exception of asking a few questions of Mr Johnson, who is not here just now, I am ready to rest.

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Mr Conner: I would like to introduce Mr Cousins for a moment or two on point that I spoke of the other day.

S. G. COUSINS

S. G. Cousins, previously sworn, being recalled by defendant Hermosa Water Company, testified as follows:

Direct Examination.

Mr Conner, Q Are you sufficiently acquainted with the course of theDeer Creek, from its head down the side of the mountains, and the pipe across the plain, to the division box of the Hermosa Water Company, to know whetheror not the course shown on Defendants' Exhibit P is substantially correct?

A Yes, sir; I think so.

Q Will you go to that exhibit and give its course, by naming the sections through which it flows, and over which the pipe line is laid?

A The course of the creek is indicated by the contour lines on the map, or the canyon itself. It heads at the base of Cucamonga Peak and would be in section 35, township 2 north, range 7 west, and extends southerly through that section, and thence southerly through section 2, township 1 north, range 7 west, and thence southerly again through section 11 of the same township; thence curving off to the eastward into section 12 of the same township; and the pipe line extends from this section into section 13 of the same township; and extends in a southwesterly direction crossing from section 13 into section 24 of the same township; and across the south east portion of section 23 of the same township; thence crossing section 26 of the same township into section 35 of the same township, into the sand box which is located in the northern portion of section 35.

Cross Examination.

Mr. Pritt: Q I would like to ask you if the creek has any defined channel all that way?

A That is the creek and pipe line from the mouth of the creek.

Mr. Curtis: I would like to ask him a question giving him an opportunity to explain his answer in regard to the accuracy of his measurements. I understood you to say that the first few measurements that you made might have been a half a foot or so out of the way. What measurements did you refer to at that time? The first measurements that you ever made, or the first measurements you introduced to-day?

A The first measurements I ever made were introduced here.

Q And those are the ones that you refer to,-- the ones

introduced early in the case?

A Yes, sir.

Q And those are the ones that you refer to as measurements that might possibly have been less correct than the ones that you have later made?

A Yes, sir; the ones made at the earlier dates.

Q In point of time?

A Yes, sir.

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Mr. Goodcell: On behalf of defendant Title Insurance & Trust Company, I offer in evidence the trust deed, of date July 1, 1902, made by the Cucamonga Water Company to the Title Insurance & Trust Company, recorded June 10, 1902, in the office of the County Recorder of San Bernardino County, in Book 316 of Deeds, page 5, purporting to cover all of the real and personal property of the Cucamonga Water Company, as security for the payment of 500 bonds of the Cucamonga Water Company of the par value of $500. each. all bearing date July 1, 1902, and to become payable on July 1, 1922, and containing the usual provisions in trust deeds of this kind.

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W. J. KINCAID.

W. J. KINCAID, heretofore sworn and examined, being recalled for defendant Title Insurance & Trust Company, testified as follows:

Direct Examination.

Mr. Goodcell: Q You know of the issue of bonds of the Cucamonga Water Company secured by trust deed which I have just introduced?

A Yes, sir.

Q Have those bonds been actually issued? and have they been parted with by the Cucamonga Water Company?

A They are held in trust by this company.

Q Are they held by the Cucamonga Water Company?

A No, sir.

Q Have any of them been paid?

A No, sir.

The Court: Have they been sold?

Mr. Goodcell: Q Have they been disposed of?

A Yes; they have been disposed of.

Q And when you speak of their being held in trust, what do you mean by that.? A re the bonds held in trust?

A I had reference to their being held in Los Angeles; we pay our interest in the bank there. That is what I had reference to. The bank has got the bonds.

Q None of them have been paid or redeemed by the Cucamonga Water Company?

A No, sir.

The Court: They are all outstanding? The whole issue?

A Yes, sir.

Mr. Goodcell: That is all I have to offer for that defendant.

Mr. Curtis: The matter between Mr. Haskell and me has not yet been adjusted.

Mr. Haskell: Case Number 5974, filed in the San Bernardino County Superior Court by Matthew Turner and others, plaintiffs, against The San Antonio Water Company, the Ontario Power Company, Old Settlers Water Company and the Cucamonga Water Company, Sunset Water Company, and I think a few John Does and Richard Roes, filed March 19, 1905,-- that case has been dismissed.

The Court: Is that the stipulation you wanted, Mr. Curtis?

Mr. Curtis: Yes. The defendants Hermosa Water Company and Sam Johnson rest.

Mr. Goodcell. The Cucamonga Water Company and Title Insurance & Trust Company rest.

Mr. Conner: The Sunset Water Company rests.

Mr. McKinley: we have all rested, except that certain matters have been reserved for adjustment.

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J. BENJAMIN
OFFICIAL REPORTER

E. T. WRIGHT.

E. T. WRIGHT, recalled for plaintiffs in rebuttal, testified as follows:

Direct Examination.

Mr. Britt: Q Have you prepared a diagram showing the situation of the Riche well, the Fodenhamer wells, Stewart well, King well, Saunders wells, Jordan well, Bourwine well or shaft, Expirimental Shaft No. 4 and 3, which were mentioned by Mr. Finkle in his testimony in support of his opinion, on the subject of the outflow of the water from what he called the Cucamonga basin or gravel basin somewhere to the southwest of the Cucamonga Springs and Red Hill?

A I have got a map drawn on a scale here just simply showing the relative distances and the elevations as given in the testimony of those various wells called for.

Q Is this the diagram?

A Yes, sir.

It is on a scale of 2000 feet to the inch. All it purports to give is the distances relatively from well no. 1 as testified to by Mr. Finkle, with the elevations of the ground, and also the water elevations at a certain date.

Mr. McKinley: Is it on a scale?

A It is a map drawn to a scale, but only in outline. Section 4 is all I put in, and the Base Line east and west.

Mr. Britt: It shows the 14th Street wells of the San Antonio Water Company?

A Yes, sir; and the Lone Star wells and the Sunset wells and I think the Mimosa well and the well K and the Old Settlers well, Riche well and Jordan well and those dry

wells to the southwest.

Q It shows with approximate correctness the situation of those wells relative to one another and relative to the section of land on which the Cucamonga Springs are situated?

A Well, hardly approximate. It is accurate. It is simply drawn to a scale.

Q 2000 feet to the inch?

A Yes, sir.

Q Having located those various wells on this map and having thus ascertained their situation relative to one another and relative to the district in controversy here, and taking into consideration also the slope of the water plane indicated by the San Antonio Water Company's 16th Street wells, including the Haskell wells and the Hellman well no. 2 at the head of the west branch of the Y Tunnel, and considering also the elevation at which the water stood in the year 1900 and in the years previously as known by you and testified by you here to have emerged in the Cucamonga Creek on the east side of the Red Hill where the so called Cucamonga Springs are situated, in view of those various manifestations of water and situation of these wells, what is your opinion as to the outlet of the percolating water penetrated by the 16th Street wells of the San Antonio Water Company and the Hellman well no. 2 in the Y Tunnel, through the mesa toward the southwest?

A It certainly is the outlet; the natural outlet, that has always been heretofore the only place where water has been known to be forced out on the east and west side of the Red Hill. The Lone Star might include it. It used

to flow a few inches and the water to-day is standing some 15 to 18 feet lower than it stood 9 years ago in the general plane above Base Line, as shown by the row of wells there, and it is much higher than it was two and three years ago, and is beginning to bring the water back into the cienegas, into the [illegible] Tunnel and the general natural channel of the water of that district.

A That answers the question, although not directly. What do you think about the outlet of that water to the south-west anywhere in the neighborhood of the spot marked on Plaintiffs exhibit F as "outlet", indicated on the map exhibit F to the west of what is also marked on the same map "west side of Red Hill"?

A I don't think that is the outlet of that basin. One reason is that well no. 1, which is the most westerly of the tier of the San Antonio wells, stands some 20 feet above well no. 2, showing that the water does not come in that direction. And that it does go the other way is evidenced by the surface of the ground and the Mady Tunnel and the cienegas on the east.

The Court: Q By "the other way" you mean to the east?

A I mean to the east and south. The water level is found in the Fourwine well or shaft some 200x feet lower just to the west of that Mady Tunnel-- probably 1000 feet west, or so, but I presume that is some of the slop-over that is flowing down there. There is some obstruction between txxt no. 1 and that which does not allow it to flow freely, or it would be much nixxxr nearer the surface of the ground in that short distance.

Q Upon what data do you base the statement about the elevation of the water in well no. 1?

A The figures that are in evidence here and as I have delineated them on the profile to show themmore especially. All the measurements of well no. 1 and 2 for the past two years have shown it from 15 to 30 feet above well no. 1.

Q I thought you were using well no. 1 as the comparison.

A I mean no. 1 above no. 2.

The Court: No. 1 is higher?

A Yes, sir; some 20 or 30 feet, but there was a year or two that it was pretty near the same.

Mr. Frith: Q How was it in 1904, in the beginning of that year?

A The first measurement we have in 1904 is on page 66 when well no. 1 stood at 1366.2 but no. 2 well was 1349. showing a difference of 17.2 feet. No. 3 isn't given. But in the latter part of that sameyear, or at least, January 11, 1905, well no. 1 is 1356.4 and well no. 2 1356.2, or only a difference between the two of xx .2 of a foot.

Q What was the condition of the wells as to pumping during the intervening time?

A Wells no. 1, 2, 3, 4 and 5 were all pumping in 1904.

Q And no. 6 also, I suppose?

A Yes, sir, 6 and 7 were not.

Q You speak of having a diagram there which show the elevations of those wells.

A I have a diagram on profile paper, taking 1, 2, 3, 4, 5, 6-- taking seven dates from the tabulation of Mr. Trask and Mr. Cousins and running them through and marking eleva-

tions of the different wells on the same date.

Q. That profile shows--

Mr. McKinley: Why don't you get one exhibit in before you get to another one? If we examine two or three exhibits we will get mixed up. I can't understand why it should make any difference to counsel.

Mr. Britt: I esteem counsel for defendants so highly that to oblige him I will offer this diagram in evidence, showing the relation of the wells to eachother on the ground.

(Plaintiffs' Exhibit 83.)

Mr. Britt: Now I want to place in evidence the next diagram prepared by the witness showing the elevations of water in the wells at different dates, and several other things.

Mr. McKinley: I object to it until the foundation is laid.

The Court: The objection is sustained.

A This diagram graphically showing the location of the water in certain wells on certain dates-- San Antonio wells no. 1x, 2, 3, 9, 4, 5, 6, 7, and 8, Hellman well no. 2, Cucamonga well, no. 6, and the Lone Star system, 5 on the Lone Star system, well K of the Cucamonga Water company, 3 Sunset well no. 1, and I see it also shows the Old Settlers well. It reads "Profile showing elevations of water in wells at Red Hills, Cucamonga California, compiled from testimony of F. [illegible]. Trask and [illegible]. [illegible]. Cousins March 1909. Elevations given above sea level Horizontal scale 1 inch equals 200 feet. Vertical scale 1 inch equals 10 feet.

Q Does that indicate the elevation of the tunnels and other excavations?

A It shows the elevation of the Eady Tunnel at well no. 9 or 14.

Q That says tunnel no. 2. Does that mean the Eady Tunnel?

A Yes, sir.

Q Will you be good enough to mark it Eady?

A It also shows the elevation of the weirs no. 1 and 2 at the mouth of the tunnel no. 2 or Eady Tunnel; also, elevation of weir no. 8 at the end of the 30-inch pipe line where it measures the creek water. Also, the elevation of weir no. 7 at the outlet of the lower Lone Star Tunnel on Hellman Avenue.

Q Does it show anything of the elevation of the water in the creek?

A It shows a little mark called creek seepage, with four different elevations xxxxxx xx written on it, as taken on those different dates by Mr. Cousins; the date is given and the elevation also.

Q Are those various elevations shown here on this profile relatively to eachother in feet above sea level?

A Yes, sir; the first line on top practically commences at San Antonio No. 3 and runs a straight line to San Antonio No. 7, not being connected with the other well, and shown by the broken line. It shows the elevations in F. C. Finkle's testimony of April, 1909, showing the elevations of the water on that date, and showing that it is something like 16 feet higher at well no. 3 than it is at present , and 14 feet higher at well xx no. 7.

Q You speak of the elevation of the galeria well no. 1 being materially higher.

A It shows on this map the highest elevation of well no. 1 that is in the record that I know of, is May 11, 1906; and then the elevation was 1419.5 feet. Well no. 2 on the same date the elevation was 1386.7, showing 33 feet difference between the two wells in a distance of about 500 feet. From well no. 2 on, continuing that same line, they fall evenly and run practically on a straight line right through to Lone Star well no. 6. There is a break at Pellman well no. 2 because the water is flowing at that time, and the elevation is not as high as the Haskell well and Lone Star well no. 6. The other elevations practically run along the same way as shown on the map. But there is three maps: one of May 10, 1906, another August 16, 1905 and another January 11, 1905, showing that on these three dates well no. 1 seemed to be working along practically with the other wells.

Q How did those dates compare with the time of heavy pumping of the string of wells?

A January 11, 1905, the pumping of the string of wells had stopped two days prior to that time. On August 15, 1905, most all the wells were pumping. No. 1, 2 and 3 were. On May 10, 1906, none of the wells were pumping. This also shows the place or connection that I have referred to of the Lone Star well no. 5 and well 1 and Sunset well. It doesn't show the real facts so much by the line, because well no. 5 shows the elevations as taken with the effect of the bulkhead in the Lone Star tunnel raising the water. The bottom of the Lone Star Tunnel or the floor of the tunnel is, as is shown on the map, some 30 feet below any of the lines at the dates taken or measurements at the dates.

taken.

Q What is indicated at this angle?

A Yes; there is an angle at the well which shows the floor of the Lone Star tunnel no. 2. And that correctly shows the distance between the Lone Star no. 5 and 6-- I mean practically-- they are supposed to be scaled on the east and west line; on the north and south line they are not.

Q At xxx several places on this profile appear the abbreviations "el" and sometimes "ele". What do those mean?

A Elevation.

Q And wherever there are figures following that abbreviation they mean what?

A Elevation in feet above sea level.

Q How are the dates of measurements shown; the dates when the elevations and the measurements were taken?

A On each line it is shown who took the measurements. It was either Mr. Trask or Mr. Cousins, except the xxpp upper one, which is Mr. Finkle. The dates are shown as May 6, 1908, and so on. The dates are shown on each line so as to get them together, and the lines are drawn from one to the other- the same day's measurements.

Q Considering the slope and trend of the water plane indicated by this profile, what do you consider of the bearing of the lines thus indicated on the question of the direction in which the water movesx within the mass penetrated by the several wells, from no. 1 to Kellman well no. 2?

A This profile, or these wells, with the exception of well no. 9 and Kellman well no. 2, are nearly in an east and

west line, so it doesn't show the greatest slope of the country; but it slopes to the east by the profile; but the main slope is to the south.

Q What about the slope of the water plane?

A The water plane is most certainly to the south; but it is not to the west. It may be to the east, if you consider that drop down to Well E. but the fact is that the water don't get out there, as we have proof of it.

Mr. Britt: We offer the profile in evidence as illustrative of the testimony of the witness on this subject, and of such other questions in the evidence as it may illustrate. I ask that it be marked plaintiffs' exhibit 84.

(Plaintiffs Exhibit 84)

Q Have you prepared a table to show the quantity of water taken from all sources east of the Red Hill now, reduced to inches of annual flow, and contrasting the same with the quantity of water received by plaintiffs before 1900 from the Cucamonga Springs and Cienega?

A I have prepared a table that is supposed to show all the water from the east side of the Red Hill, including Sunset, Hermosa, Upland and Old Settlers Water Company and Cucamonga Water Company, and also the Cucamonga Springs and Y Tunnel. It is just a small tabulation.

Q What have you attempted to show? Perhaps the title of the paper will disclose it.

A "Cucamonga Springs, including Y Tunnel, and amount of water from developments farther east (claimed by witnesses Trask and Finkle to be part of the east side water), in steady flow from 1885 to 1908, in miners inches." „ txxxxx

J. BENJAMIN
OFFICIAL REPORTER
SUPERIOR COURT

Q: Taking the output of the Sunset well, Upland well, Hermosa well, and the Old Settlers well, how have you treated the measurements of water in those wells for the purposes of this table?

A. From the testimony as given-- the number of days pumped, I have reduced it to a steady flow in miners inches. Where they pumped 30 inches for half a year that would be 15 inches for the whole year. The paper gives seven columns. One each year from 1885 to 1908. It gives six columns besides the dates. The first is the 526.97-acre tract; next is all the Cucamonga Water Company's water outside of the 526.97 acre tract; next is the Old Settlers Company; the Upland Company; the Sunset Company; the Hermosa Company; and the total of all the companies.

Mr. Britt: We offer this in evidence.

Mr. McKinley: We object on the ground that it is not in rebuttal, incompetent, and a mere repetition of the testimony in the case.

Mr. Britt: We claim it is rebuttal of the testimony produced by Mr. Trask and Mr. Finkle on the subject of the alleged or supposed amount of water furnished now by what they call the East Side District. We have sought to bring together here the various outputs of water and show it in annual inches.

The Court: Overruled. Of course, defendants will have an opportunity to meet it.

Mr. McKinley: Exception.

A. It embraces all the measurements of all the other companies and what I gave for the Cucamonga Water Company yesterday.

The following is a copy of said tabulation:

CUCAMONGA SPRINGS, INCLUDING Y TUNNEL, AND AMOUNT OF WATER FROM DEVELOPMENT PARTIES EAST(CLAIMED BY [illegible] THAT [illegible] [illegible] TO BE PART OF THE EAST SIDE WATER), IN STEADY FLOW FROM 1885 TO 1908, IN MINERS INCHES.

	526.97 ACRE TRACT.	C.W.C. OUTSIDE 526.97 ACRES.	OLD SETTLERS.	UPLAND.	CURLEY.	HERMOSA.	TOTAL.
1885	277.11	2.02					279.13
1886	337.56	2.02					339.58
1887	327.00	2.00					329.00
1888	357.49	13.59					371.08
1889	361.42	9.78					371.20
1890	514.62	11.05					525.67
1891	No measurements						
1892	"	"					
1893	"	"					
1894	356.29	8.00					364.29
1895	374.40	7.00					381.40
1896	281.55	7.00					288.55
1897	235.50	9.42					244.92
1898	180.43	47.00					227.43
1899	172.53	51.00					222.53
1900	138.41	65.04					203.45
1901	131.94	68.51		6.00	Es10.00	8.50	224.95
1902	44.28	61.85		16.05	Es12.00	9.20	143.38
1903	15.30	57.30	10.30	11.34	11.27	0.	106.51
1904	8.22	72.10	12.45	10.52	21.50	11.35	136.14
1905	5.76	49.00	9.60	4.40	24.70		93.46
1906	12.20	46.30	10.00	6.70	22.10		97.30
1907	33.20	71.50	4.30	8.65	19.65		137.30
1908	54.00	66.60	2.50	9.50	27.40		160.00

L. BENJAMIN
OFFICIAL REPORTER
SUPERIOR COURT

Q You may state, using this if you like, how the water including that pumped by the Hermosa well, Sunset well and the Upland well and the Old Settler's well,-- including the water taken from these sources-- compares at the present time with the flow of water from the Cucamonga Springs when they were in normal condition.

Mr. McKinley: Objected to-- Is that matter shown by the table?

Mr. Britt: I want the witness to state it here so that it will have the attention of the Court.

Mr. McKinley: Does the question simply cover what is on that table?

Mr. Britt: Yes.

Mr. McKinley: Objected to on the ground that the tabulation is introduced in evidence and the matter is already covered. It needn't be repeated by the witness stating over the table.

Mr. Britt: Will it be considered as read?

Mr. McKinley: Certainly; not waiving our objection to its introduction.

Q Now, Mr. Wright, what is your opinion, stated in connection with this table, and taking into consideration the knowledge that you have of the flow of water in these various developments,-- what is your opinion as to the water which by nature emerges in the Cucamonga Springs being taken out now by the Sunset well or the Hermosa well, the Old Settlers well or the Upland Water Company's well?

Mr. McKinley: Objected to as not in rebuttal and going into plaintiffs case in chief. Their case was to show against all these defendants that the flow of the Cucamonga Springs

and Y Tunnel had been interfered with by these wells. Plaintiff introduced evidence in that respect fully in his opening and in this session of the last six weeks; and this is simply a repetition of the testimony. The witness has stated his opinion on all these matters, on cross examination at any rate.

* * * * * * * * * * * * * * * * * * * *

The Court: Objection overruled. Defendants except.

A I think I have stated, and I will state, that I do not think that the Sunset or the Hermosa or the Old Settlers well practically take any water from these springs. How the Upland well is, is anotherquestion. That is above and nearer a direct line and there may be something of that water that might work its way down if it hadn't been taken away

The Court: Q You express no opinion on that Upland well?

A Yes. I express no opinion on that well at all.

Mr. Britt: Q What if any confirmation of that view do you find in this table received in evidence, of the opinion that some other influence than the pumping of those wells which I mentioned a few moments ago,-- Sunset well and Hermosa well and Old Settlers well, Upland Water Company's well,-- have operated to deplete the springs?

Mr. McKinley: Objected to on the same ground.

The Court: Overruled.

Mr. McKinley: Exception .

A Because by the table that I have prepared, by the testimony, I find that even if all these wells had taken their entire water from the springs, that there is still less

than half of the supply that has been flowing for the past seven years than there was for the previous seven years, and the past four or five years were good wet years, and we had some dry years in the previous seven.

Q What do you know about the feasibility of putting a bulkhead into the Y Tunnel and restraining the water from that tunnel as intimated by Mr. Finkle should be done?

A I don't think it is practicable on account of the porosity of the soil. At the mouth of the Y Tunnel it is almost a huge body of boulders , rocks and loose material; and the main part-- in fact almost all the tunnel in the west branch was through an open gravel soil, and the height that you could raise it would be very small and it would simply waste itself, or it would come out further below in the cienega by working through the soil, and not be stored. It might be possible to cap that well and save water that way. I don't know myself of any point in that tunnel where you could put down a bulkhead just to stop the tunnel, but what it would work its way right through the gravelly soil around it.

Q What do you know about the rate of recovery of ~~txx~~ a well after it has been subjected to pumping,-- the cone of depression caused by pumpingx of the well having its little end downward? When does the well rise more rapidly?

A Immediately, almost. It rises the fastest at first because there is a smaller circumference in the funnel shaped cone . It rises faster the first day or two than it will after that.

Q Have you goven some consideration to the proposition considerably elaborated by Mr. Finkle that the discharge of

water from the Cucamonga springs does not vary with the hydraulic head at well no. 7 in accordance with the physical law governing the discharge of fluids in contact and at different elevations? Have you considered that somewhat?

A. Yes, sir.

Q. Are there any reasons occurring to you why an exact, close or even approximate correspondence of the discharge from the springs should not be found with the elevation of water in well no. 7 or any other well?

Mr. McKinley: Objected to as not in rebuttal They have a peculiar condition in regard to this matter: They undertook to prove that the discharge of the springs varied with the hydraulic head at the well. We met that by the evidence that it don't so vary. Counsel now enters into an examination by which he seeks to explain why it does not vary. We submit that it is not in rebuttal at all.

The Court: That is my recollection of the record.

Mr. Stevens: There was no such testimony as was assumed to be in the record by Mr. Finkle. There was no statement to the effect that they varied absolutely as the-- that there was any such relation to the head as stated by Mr. Finkle. The statement was simply that there was a correspondence between the head and the discharge-- a general statement to that effect, and that is all there was of it.

The Court: I know that intimation was made at the time Mr. Finkle was being examined, ~~but~~ that there has been no such direct statement as that made.

Mr. Stevens: I went through the record very carefully and I have references to the volumes in our possession, but I haven't them here.

The Court: I believe your witnesses put in some diagrams which illustrated the theory, and I assumed that it meant a direct relation without the introduction of the square root.

Mr. McKinley: Yes; and we met it by evidence.

Mr. Britt: Suppose we pass that matter for the present, and I will ask some questions about other matters about which I think there is no doubt that they are proper rebuttal.

Q Mr. Wright, in illustrating his argument that there was no connection between the discharge of the water at the Cucamonga Springs and the elevation of the water at well no. 7, Mr. Finkle mentioned certain figures. I read from page 4569: He said on March 30, 1908, the elevation of water in well no. 7 was 1373.4 feet; the discharge of Cucamonga Springs was 49.71, which I understand to be inches, although inches is not stated,-- on March 15, 1909, the elevation of water in well no. 7 was 1373.4 feet again, and the discharge of water at the springs was much greater, he claimed. Have you given any examination to those figures?

A Yes, sir.

Q What have you to say on the subject?

Mr. McKinley: Objected to as incompetent and not in rebuttal.

Mr. Britt: We want to show that Mr. Finkle is mistaken.

Mr. McKinley: The question is indefinite. If it is to show

that the figures don't include everything it would be competent.

Mr. Britt: That is precisely what I want to showx.

Mr. McKinley: Then I withdraw theobjection.

A On the second day the elevation was identically the same, as testified to by Mr. Finkle. Also, on that date, instead of using a variation between 49.71 and 72.30, there was a variation only of half an inch, as Mr. Finkle forgot to include the Y Tunnel flow. He should have had the Y Tunnel in. It was flowing some 20-odd inches that day, and so in that particular case it makes them agree almost exactly.

Q Makes what agree?

A The discharge with the head.

Mr. McKinley: I will state that Mr. Finkle has that place marked for correction and he has not made that correction yet.

Q Any other instances? There were a number of other deadly parallels drawn by Mr. Finkle about the same time, of marked divergences alleged between the elevation of the water and the discharge of the springs when contrasted with the theoretical flow. Were there any of those other instances stated by Mr. Finkle which your investigation has shown to have been mistaken in their elements?

A Yes, sir.

Q Which are they?

A On the same page. 4069, October 21, 1907, the elevation 1760.4, and the flow is given as 70.4; and in December 6, 1908, elevation 1760.4 and a flow of 32.4. The error is made in the 70.4, because one was 33.71 inches flow

and the other 23.55, showing only .16 of an inch variation between the flows for the same elevation at that well.

Mr. McKinley: That is corrected already on page 4574.

A There is one other error which I don't know whether Mr Finkle has corrected or not. The next comparison I have is page 4626, where he has given the elevation for April 7, 1909, as 1375.1, and May 27, 1908, 1375.1, being the same, and the flow he gives as 82.84 at the present year, which is correct, with 47.50 in 1908, which is not correct, as the amount should be 80.18, if he had added the Y Tunnel to it, making it within 2 inches of the same quantity of discharge.

The other four cases called for, three of them represented times when there was 5 or 6 or 10 or 12 inches flowing --

Q Flowing where?

A In the creek; and it did vary, as far as I can find out, exactly as Mr. Finkle stated. And also in his first one, where he called for October 9, 1909, the elevation of the well as being 1376.7, and for the same date-- I don't know what year that was-- October 9, 1900, 1376.7, and May 11, 1908, 1374.7, being only two feet difference in elevation, and he gives the discharge in 1900 as 125.78 inches and last year, on May 11, 78.83 inches, which, as far as I can find, is correct, except that there is a reasonable explanation for it, because in 1900 they had not yet pumped out the whole supply up above, but they were lowering it, and the well was pumped at this very time, and the well was within 5 or 10 feet of what it would have been if they had stopped pumping for another week.

J. BENJAMIN
OFFICIAL REPORTER

Q Above what would it have been?

A Lower than what it would have been. If they stopped for a week it would have raised that much.

--o0o--

Here the Court takes a recess until tomorrow, April 22, 1909, at 10 o'clock a.m.

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J. W. McKINLEY.

IN THE

Superior Court

OF THE

County of San Bernardino

State of California

Cucamonga Vineyard Company, et al.,

Plaintiffs

vs.

San Antonio Water Company, et al.,

Defendants

Vol. 58.

Thursday, April 22, 1909

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I. BENJAMIN, Official Reporter

Thursday, April 22, 1909. Fifty-eighth day.

B. T. WRIGHT.

B. T. Wright, being recalled by plaintiff, his direct examination was resumed.

Direct Examination.

Mr. Stevens: If the Court please, and Judge McKinley, in looking over the testimony of Mr. Koebig and Mr. Purcell, I find the following references in the matter of the hydraulic head. (Mr. Stevens refers to and reads extracts from the testimony found at pages 1206, 1299, 1157, 1619, 1732, and 1716).

* *

Mr. McKinley reads extract from page 1661 of the transcript.

* *

Mr. McKinley: I have no objection to counsel examining the witness upon the subject.

Mr. Britt: Q Resuming where we left off yesterday evening, take these instances to which Mr. Finkle refers, the elevation in well No.7 in the spring of 1908 and in the spring of 1909, and when they are corrected by ascertaining the precise conditions which did obtain on those dates, how do you find that the discharge compares with the formula stated by Mr. Finkle?

A They agree exactly, as far as that goes.

Q Give the figures.

A The figures for March 30, 1908, when the elevation was 1373.4, the discharge was 72.06 inches; and in March 18,1909, when the elevation of well No.7 was 1373.4, the discharge was 72.30 inches, making less than a quarter of an inch difference between the two. And of all the instances that Mr. Finkle cited -- the seven or eight instances as mentioned -- they all

agree except that instance of 1900 --

Mr. Britt: Let us not go too fast. In what way did they agree?

A They all agreed with each near enough to prove the rule. I don't think but what he might find others that wouldn't; but the ones that he did give do agree. I do not call it any disagreement when the head is the same one year and another year and there is a flow of seven inches one year and next year ten or eleven. The quantity is too small to be called a disagreement, although proportionally it is thirty or forty per cent, and I don't think you can compare those small quantities with each other. That is what I mean by agreeing, and I call them agreeing when there is three or four or five inches difference, even if it is a small quantity.

The Court: Q You mean by that, that if the figures were large, the tendency would be to prove more definitely the relation?

A Oh, yes; I presume -- I haven't tested it -- but I presume when you take any of the cases of last year, 1908, and this year, 1909, after the I tunnel has been flowing as it is flowing today in small amounts, and if you take dates on which the elevation is the same, and your flow will be nearer than ten per cent (I will put it at that) -- I don't think it has varied that much in any of the cases given) for the same date last year and this year when the conditions were the same, pumping about the same, and the water flowing out of the I tunnel in both cases, which makes them practically the same basis, you might say.

Q What are your reasons, why would you expect to find that

the discharge at the springs including the Y tunnel, would not maintain an exact correspondence or even an approximate correspondence at all times with the elevation of the water at well No. 7?

A Why I think the distance and elevation that the water flows out there, being on a side hill, and as the water comes down from the wells above, not only well 7, but all the wells, not any one well you can take, as the water goes down in those wells the pressure is less; consequently it strikes different materials, and it takes more pressure to press out through hard material than it does through loose material; and the material is not the same in all that sixty feet elevation between the bottom of the creek bed and the Y tunnel, and the water is flowing out at most all points in perpendicular elevations; the main reason why they may not and might not agree is the difference of pumping at one time or another and the effects of pumping being felt for two or three months afterwards as far as the zone of depression in and around not only the well but the general district.

Q What about the width of the mass of earth, gravel or boulders or other material horizontally through which the water emerges?

A That water was flowing out originally on the east side from the mouth of the Y tunnel, or toward the head of the Y tunnel west and southwesterly for over 2000 feet at least, possibly 2500 feet; and there was no 100 or 200 feet but what water was oozing out of the ground; no place but what there was a cienega or near a cienega; it is pretty hard to make one rule to apply to all cases of that kind; it seems almost an

impossibility. I think it does apply much nearer than I believed it would.

Q What about your measurements made under different conditions of atmospheric pressure: Does that affect the matter to any extent, low barometer or high barometer?

A I don't think it would affect it very materially; I don't think so, not much; it would some; during the hot times it might have had more effect than during the other days; on the hot days in summer, in the open cienegas it would evaporate in that way.

Q Suppose the discharge of water is spread out extensively in cienega form, or in the cienegas exposed to evaporation, would that affect the total amount measured?

A Why we noticed between early mornings and afternoons that the creek coming from the cienegas would vary in the afternoon from the morning, in the hot days when we had several measurements made the same day. But when you came to look at the percentage, in a large flow, for instance if it was over a hundred inches, you don't notice the percentage; it is only two or three or four or five per cent.; it was comparatively small.

I would like to say, in reference to this same matter, you take Mr. Finkle's diagram that Judge McKinley has in front of him, Exhibit F 1, and take the same of the dates that Mr. Finkle has given on this diagram, actual discharge and the theoretical discharge, there is no case on his diagram, under his own figures, but what the discharge lowers as the head decreases; or raises when the head is increased; there is no single case; it don't go down to the facts of the discharge at all, but

the principle of the thing that when the head is low you will find the discharge is lowered, and that shows on the diagram in every case. I made several trials to see if I could find any case that would fit this rule and fit the ground exactly, but I couldn't do it by using at all the 1090 or the 1900 head. By going back to that tunnel I could get no sets of measurements that I could make fit, and come close to the actual facts of the ground, because one had the Y tunnel flowing, and the other eliminated. You ~~xix~~ could get a much nearer actual discharge if you take the common head at the lower end as about 1340 or 1342 instead of 1335, as Mr. Finkle took it, clear to the mouth of the pipe, but it won't fit it even then.

Q Is there any reason why the first elevation you gave is a proper elevation rather than the 1335 feet?

A That is nearer where the springs actually rise; where the water flows from in the springs. It is certainly much nearer the center of all the water flowing than 1335, which is away below the point, where any water rises at present.

I want to add another thing: You take any of the dates worked with each other, since you have used the Y tunnel as a factor, and they will work out very nicely, because that simply helps to balance the unevenness, I presume, of the other flow, because that is one point that flow comes out, and it would help to balance the other irregularities, and will average much closer, and as a case or two is given here why they were practically exact.

Q Directing your attention to the views expressed here, that the rise of water, increase of water in the Eady tunnel in the month of January, 1905, following the cessation of pum-

ing of the 16th street wells, might have been due to the rainfall that occurred about that time, I inquire of you what have you observed as to the rapidity with which even a heavy fall of rain will sink toward a tunnel 60 feet or more beneath the surface of the ground?

A I don't think there wver was a rainfall heavy enough to affect the ground 60 feet beneath the surface in any reasonable time; and I mean by a reasonable time a week or a month or two months; it would have to fall somewhere above, and work its way down into the tunnel to affect the tunnel; by falling on the tunnel it could not get into the tunnel in any reasonable time, in one or two or three months; consequently the rain fall could have had absolutely no effect on the flow of the tunnel.

Q You mean immediate affect?

A Well that is what I say, within one or two or three months I will put it so as to be perfectly safe in that.

Q You have observed something of the ~~difference~~ distance to which the ground is wet from the surface after heavy rains, say of three or four or five days duration, which are rather longer than we have usually in this country?

A I have, and it is rare that you find that the soil is wet over two to three feet; it would be a long heavy rain and rather porous soil to be wet from the surface from a rainfall, three feet deep.

Q After a rainfall has continued how long?

A Well, say a rainfall of three or four days, as far as that goes. The same statement would apply to the Y tunnel on the east side, as far as that is concerned, because that is below

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the surface far enough so that there is no possibility of any rainfall affecting it, surface rainfall, with any week or month or two months; it is forty odd feet below the surface.

Q There is a chart here, showing the locality of several different wells: I wish you would point out on the chart the two wells which have been represented here as standing at such different elevations, one I think 37 feet higher than the other. That is Exhibit 33. Do you know the two wells which show such discrepancy in the surface elevation?

A Near the Cady tunnel?

Q Yes, sir.

A Yes, sir.

Q I think you said they were about 25 feet apart, and that the one stood some 37 feet above the other until the latter was cut into the tunnel.

A They were between 20 and 30 feet apart. I am not sure of that, but about that. They are wells 8 and 9, marked on Exhibit 33, as Ontario Power Company -- "Ontario Power Company" above them; No. 9 was the well that was cut into the bottom of the tunnel at that time, ten years ago, I think it was, or nine. The No. 9 well is 347 feet deep from the surface of the ground to the bottom of the well; No. 8 was not cut into the tunnel, and the water was standing, so the testimony showed 37 feet above the floor of the tunnel, and is 337 feet deep.

Q What do you consider to be the explanation of the circumstance that the water in what is denominated well No.8 stood so high above the bottom of the tunnel?

A That the wells were not connected with the same strata; the well 8 did not reach down to the deeper strata that the

other well was connected or cut to; whether the well No.9 might have passed through the same strata of water that connected with No.8, I don't know. If so, my record doesn't show it; but it was not cut into the same strata any way.

Q What do you consider to be the effect on the Cucamonga Springs, and on the lands of the plaintiffs, in the case of the spreading operations carried on by the San Antonio Water Company about the surface channel of the Cucamonga Creek, in or about or along the surface channel of the Cucamonga creek between the mouth of the mountain canyon and the Cucamonga Springs?

A Damaging to the plaintiff.

Q In what way?

A Because there is only one or two storms during ordinary winters when any water passes over the surface below 16th street; it would not average over two storms a winter I am sure; it simply is diverting the water over to the westernmost channels, and bringing it down nearer, you might say, toward the Lady tunnel, and bringing it a little away from the easterly channels.

Q Do you think that such operations have any tendency to take the water from its natural direction toward the springs?

A If the water is diverted into any any channels that run to the west, out of the channel that leads to the springs, and diverting water that would have run down and sunk before it gets to base line (which is the case most of the time) it is practically diverting water over in another direction.

The Court: Q You used the word "channel".

A I mean southerly channels. There is four or five or six

channels.

Q You mean surface channel?

A Yes, sir.

Q Do you mean to imply in your opinion that there were underground streams?

A No; but I imply the opinion that if you turn a stream on 19th street on the easterly channel and one on the westerly channel, each one would tend more to flow underneath and probably work down something after the same course of the channel above it in the surface stream, until it meets some barrier that diverts it perhaps.

Mr. Britt: Q If the water were not interrupted at all, and if there were a storm heavy enough to bring it down as far as the north line of plaintiff's land, in the channel of Cucamonga creek, what do you think of the greater portion of it sinking in the near neighborhood of plaintiffs' land -- the probability of the greater portion of it sinking in the near neighborhood of plaintiffs' land, than if it is turned out into lateral channels some miles above?

A A much larger proportion would sink under the stream as it passes down if there was a ~~xxxxx~~ stream of a thousand or two thousand inches flowing than if it was five or sixhundred or two hundred or one. The stream starts and tears out the channel and opens up the pores more in a heavy stream.

The Court: I take it you have been speaking entirely of omm water of the Cucamonga Canyon poured on the Cucamonga cone?

A Yes, sir; entirely so.

Q What is your opinion as to the water brought over from

San Antonio Canyon?

A I think it is a good thing for the district to have the water brought over there.

X How much goes down to the wells, as far as that is concerned, I am unable to say; but I think it is a good thing to have the water poured in there. It throws it into that basin. Of course the greatest fall is due south, and if there isn't any obstruction it will go south, and not get over to any of the wells.

Q To what degree do you concur with Mr. Fickle and the other experts on the other side, that even though the water turned in from the San Antonio watershed may not directly reach the tunnels and wells, but that it may by supporting the underground water in-directly feed the tunnels and wells?

A I certainly consider it a good thing to have water turned in there. There is some obstruction so that the water does not flow down by the south-west as is shown by the elevations of the wells, and of course any water that gets inthere tends to make some body of water to fill up some dry holes in that district, because it cannot pass actually to the south-west, because there wouldn't be water standing so high in well No.1.

Mr. Britt: Q That water that is turned in from the San Antonio canyon is a long way from well No.1?

A A mile or a little over; probably about a mile; and it is a considerable distance west, and the main surface flow is considerable west of well No. 1.

Q What amount of surface flow?

A I mean the main surface flow when there is any water flow-

ing down the washes. It would all, as the end of that conduit that we saw conveying water on March 15, when the court was out there on the ground --

Q You mean the conduit at Euclid Avenue?

A At 19th Street. And they ran east a quarter to a half a mile --

Q Southeast wasn't it?

A First east, and then southeast for another quarter or half a mile, as we all saw it on that day.

The Court: Q You mean that open ditch?

A Yes, sir.

Mr. Tritt: Q How much greater is the slope of the ground there to the south than it is to the east where that open ditch discharges?

A At that particular place it is almost due south. The main slope is almost due south, because the fans are turning due south on the western portion of the cone of the Cucamonga wash.

Q Is there any slope at all to the east?

A No, I don't think so, right there. Of course the contour would probably show. But it is so near it that you can call it south. I am speaking of the westernmost fans at the mouth of the Cucamonga wash.

Q When you speak of turning water over there, as a good thing, to what extent is it a good thing for the Cucamonga Springs or the Eady tunnel?

A I think of course if it affects either of them, it would be a small effect on the springs compared with the effect on the Eady tunnel, if they were all open, because it all would have to pass the elevation that would contribute to the Eady

tunnel first, before it can get over to the springs. It would simply have a chance to flow out of the Eady tunnel, if it is open, or the out-lets in the cienegas on the west side, which it would if the bulkhead was backed up high enough.

Q To what extent does the San Antonio Canyon water turned in there affect the flow of the Eady tunnel or the springs?

A I don't know that it affects it at all. I haven't any proof that it affects it all at all.

Q Do you observe any evidence in the case that it has any effect?

A No, sir.

Mr. McKinley: Objected to as leading and suggestive. Counsel forgets that he is not cross-examining this witness.

The Court: The question has been answered.

Q Mr. Wright, you mentioned yesterday in rather an incidental way, that the Hellman well No.2 had risen in some seasons notwithstanding the fact -- possibly only in one season, but at any rate there was one, -- notwithstanding the circumstance that well No.6 of the Cienega Water Company at the head of the Lone Star tunnel was pumped, and you stated some views about the sympathy between these wells or comparative amount of sympathy between those wells, and the sympathy between the Hellmanwell No. 2 and the 16th street wells of the San Antonio Water Company: Can you refer specifically to the figures measurements which illustrate the view you stated on that subject?

A Yes, sir.

Q State those figures.

Mr. McKinley: Objected to on the ground that it is indefinite and uncertain. If the witness is going into the relationship of the Lone Star well, whether this is rebuttal or going into plaintiffs' case in chief, it is impossible to determine from the question.

Mr. Britt: I don't think there is anything indisfinite. I asked the witness to refer to the figures which illustrate the statement he made and the evidence he gave which was certainly evidence in rebuttal of the testimony which was given by the witnesses for the defendant, tending or designing to tend to sustain the proposition that the Cucamonga well No.6 at the head of the upper Lone Star tunnel was what had played havoc with the Cucamonga Springs.

The Court: I understand it is only explanatory of the witnesses' previous answer. the objection is overruled.

Mr. McKinley: It is part of the contention that No.6 does not affect the Cucamonga Springs and Y tunnel.

Mr. Britt: We expect that the figures are such that will show a much more direct and immediate sympathy between Hellman well No.2 and the Haskell wells and 16th street wells than with the well at the head of the Lone Star tunnel. That was the opinion the witness expressed yesterday, and I want to get the reasons for it.

Mr. McKinley: I want to find out if plaintiff is going north or going south on this proposition -- if they are seeking to show that the wells of the Cucamonga Water Company affect the springs or tunnel or if they do not.

The Court: The effect of the testimony may be both ways.-- kind of spreading out. The witness is asked to explain an ans-

wer already given; and while it might indirectly have an effect of doing the one, the fact that it may do the other, would seem to make it permissible.

A I made the statement yesterday, not that the pumping of well No. 6 did not affect the Y tunnel or the springs, but that the quantity of water pumped was not enough to have the effect that would make xxa showing when larger quantities were taken out above there. That profile that Mr. Goodcell put in shows that although it might affect both the springs and the Y tunnel, it would only affect it in proportion to the amount of water pumped from that well as compared with the amount of water pumped from the other wells, and it is a much smaller quantity pumped from that well.

Q I want you to state the data or figures which sustain your views and illustrate your views.

A Take Exhibit 3 which I have before me, and it shows that in the year 1904, all during the season until January, 1905, when the San Antonio wells stopped pumping, that the water in the Hellman well No.2 constantly lowered, having fallen some 15 feet in 9 months pumping of the San Antonio Wells, and also at the same time a large share of the time No.6 was pumping too. From January 5, 1905, to May 11, when the San Antonio wells were not pumping, well No.6 of the Cucamonga Water Company was pumped a portion of the time. The records show here that it was pumped about one-third of that time, or possibly a quarter.

Q Between what dates was that.

A Between January and May, 1905. Probably about a quarter of the time by the record. And it was pumping from 30 to 33

inches, so far as the quantity goes. The water rose in that time 16 feet.

Q Rose where?

A In the Hellman well. It rose between those two times 16 feet.

Q You mean Hellman well No.2?

A Yes, sir; at the west end of the Y tunnel. That is the only Hellman well ever referred to. And then between May 11th and the 16th, those two dates shown by the record here, there was that sudden drop, when the bottom fell out or some opening was caused in the casing of Hellman well No. 2 and it dropped eight feet in three days, as has been testified to by Mr. Koebig and Mr. Purcell and myself; from May 16th to August 16th, 1905, the water level remained about the same. I will get it exactly. The water had fallen less than one foot in those five months, or May, June, July, August -- those three months. And all during this time the Cucamonga Water Company's well No.6 was being pumped and was flowing between 35 and 40 inches every day by the records here. In the next 35 days to September 21, the same condition. The Cucamonga Water Company's well was being pumped and the San Antonio wells not being pumped, and the water lowered in Hellman well No. 2 two and a half feet. This was in the middle of the summer or the dry season as it is called, from September 21 to October 6th.

Q Let me ask you if San Antonio Water Company's well No.6 did not commence pumping on August 15, 1905?

A My first record of the San Antonio Water Company's well pumping is August 15, 37.4 inches. I have it that they were

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pumping August 15, 16 and 17.

Mr. McKinley: Q To save time, might I ask what the Daly tunnel and the 16th street wells were doing then?

A None of the 16th street wells were being pumped at that time. The out-put of the Daly tunnel was 230 inches. That was before the bulkheading.

Q It was running continuously during all that time?

A Yes, sir, it was running continuously; it was open. I have stated that for the next 36 days to September 21, with the same conditions, the water fell -- there was no pumping except for a few days -- no, they were pumping steady I guess-- I have a note here on Exhibit 3 "pumping but weir is locked". I wouldn't know how much was being pumped, any more than by reference to Mr. Trask's testimony in that case.

Q Would you like to have that?

A If you please. (Continuing answer) -- to September 21, the water fell in the Bellman well No.2 two and a half inches. At that time there was pumping of wells 1, 2, 3, for a few days, and 6.

Q Do you mean two and a half inches or feet?

A Two and a half feet.

Q You said inches.

A I meant feet. From September 21 there was practically continued pumping till November 4, and the water lowered in the well something over four feet, in the Bellman well No.2, although it was the season of the year that ordinarily without being taken out of the ground there would be a rise in the water between September and November. Generally, water in these springs or tunnels or wells-- except for some arti-

ficial reduction -- will rise at that time of the year. From November 4 there was a steady rise in the water in Hellman well No.2, until -- take the date of June 4, which is the last measurement on Exhibit 3 where they were kept regularly and daily.

Q What year?

A June 4, 1906. And it made a raise of something over twelve feet in that time, although the last month of May the pumping of the Lone Star well No.6 had been nearly continuous -- about two-thirds of the time or a little over, by the records shown here, and in the last month the water had risen just one foot only. I give these examples not to show that Lone Star No.6 had no effect, but that it does not have enough effect to keep down the supply of water by natural increase. I don't say it has no effect.

Q But when the Harwell wells and the 18th street wells are pumped, what do you find to be the invariable accompaniment?

A Invariably after they have been pumping from two to six days there has been a lowering of the water plane at Hellman well No.2, with no exceptions. At no time have they been pumped that long but what it has tended to affect and lower the water plane at Hellman well No.2.

Q Have you a record or notes made at the time of the water delivered at the San Antonio Water Company from the Hady tunnel from July to December, 1906?

A I think I have. Yes, sir, I have in my note-book. Shall I read it?

Q Yes, sir.

A Cucamonga Fruit Land Company, a statement of the amount

of the amount of water delivered to the San Antonio Water Company from July 1st to December 31st, 1900.

Q You kept this yourself?

A Yes, sir. It is my own handwriting, and it was kept from my own measurements.

July, the average was 81.35 inches.

August, 79.51 inches.

September, 101.40 inches.

October, 103.01 inches.

November, 100.4[illegible] inches.

December, 106.67 inches.

Making a total, after you divide by six, for the six months, of 95.73 inches. Then I have the amount deeded, 80 inches, balance ~~[illegible]~~ 15.73 inches, at one thousand dollars, equals $10730.00. Interest at six per cent for six months, $561.[illegible], due to the Cucamonga Fruit Land Company to January 1st. And I will add that I think they settled on that, and made the payment to the company at that time.

The Court: Q The Cucamonga Water Company?

A The Cucamonga Fruit Land Company. It was part of that 150 inches deeded to the San Antonio Water Company; that they hadn't delivered the full quantity of 150 inches, and the San Antonio Water Company had only paid for 80 inches and the balance they were paying interest on.

Q Did the San Antonio Water Company get any of that water previous to July 1st, 1900?

A They got some of the water, but I don't know how much.

Q If your notes don't show how much, I will not be further

inquisitive about it.

A I haven't any notation of where I have any measurements prior to that -- I mean consecutive measurements for the mohbh.

Cross Examination.

Mr. McKinley: Q You say that the San Antonio Water Company has received water from the Eddy tunnel prior to this water of which you have given the notes here?

A Yes, sir; I say so.

Q What water was that? How did they come to receive it?

A The deed was made to the San Antonio Water Company of water in the spring of 1899, and I think delivered all the water they could raise or scratch up to fulfill that deed as soon as the deed was made.

Q About how much, if you know?

A I imagine there was some measurements in the case. I haven't got a reference to any, but I think there was testimony as to that.

Q Prior to that sale had they received any of that water from the Eddy tunnel?

A My memory? Is that what you want me to say?

Q I will make it more difect. Wasn't there a lease of some of thatwater?

A I think they were receiving 30 inches from Stowell for some time prior.

Q How long prior?

A I guess I couldn't state, any more than some time.

Q That well was put down in 1896, if you remember. About

how soon after that was there a lease and water delivered to the San Antonio Water Company?

A I don't think I could state. I could give my opinion.

Q As near as you could recollect.

A I should think it would be in the latter part of 1898. That would be my guess now -- yes, it was '98 some time.

Q And from that time on till the making of this sale, that water was dlivered by Stowell to the San Antonio Water Company?

A That 30 inches?

Q Yes, sir.

A I think it was. We called it his water. The Cucamonga Water Company considered it his water.

Q Water from that well?

A Yes, sir.

Q The deed that you referred to was the one made in April 1896?

A Yes, sir, that is the deed. It was an agreement to convey. I don't know whether it was a deed or not.

Mr. Gregg: Q It was the scratching up of water to fulfill that agreement that you referred to.

A We tried to carry out the contract to give 100 inches, and made every effort to do so.

Mr. McKinley: Q You have testified with reference to the movement of the waters from the neighborhood of the Red Hill and that they do not in your opinion go through that the out-let described by defendants' witnesses: Where do those waters go out in your opinion where not interfered with by any artificial diversions?

A I think they would come out in the channels today where they have been for the past 30 years, and through the Cucamonga Springs and the springs on the west side and the east side, and the combination of springs.

Q In your opinion did all of the water passing out of that region go through those surface channels?

A Possibly not all, but so large a proportion of it you could call it all. And the water certainly does not flow out to the west until it supplies the channels through what is called the Hady tunnel district and Cucamonga Springs district -- till it gets to a higher elevation than it was in 1900, and it is now 15 foot less than that.

Q Then in your opinion did the waters passing out from those watersheds prior to these developments, appear upon the surface of the west and east side in the springs and cienegas?

A I didn't say all, but I judge a large proportion of it, because it shows that the supply of that district from the Cucamonga Canyon, taking tall things considered, would not be much greater than was flowing out.

Q Where and in what way did the small excess that you speak of go out, in your opinion?

A I presume it was tending to saturate itself to the west and east and all over the district, and possibly leaks out over some barrier which must be between the San Antonio No.1 and what they call the Dorrwine shaft, 1500 or 2000 feet south and west.

Q Where in your opinion was the out-let of that through take the Red Hill?

A I think a majority of the water that came out on the Red Hills showed on the surface.

Q About how much did not show on the surface.

A I haven't any knowledge as to how much there was. There was more showed on the surface than half to two thirds of the supply.

Q What is your opinion in regard to it, as to what sort of proportion there was that did not show on the surface but passed out some other way?

A I don't think I have gone into details enough to know to a certainty how large a quantity of water there was.

Q I don't want certainty. We don't expect that from an expert. Just your estimate.

A I couldn't answer such a question as that without taking something as a basis. You might take Mr. Ficklin's statement as to the amount of the water coming into that district from the Cucamonga Canyon and the east side of Deer Canyon which may be about right. I don't know anything to the contrary. But I would eliminate Day Canyon and San Antonio Canyon from his estimates, and see what the difference in quantity would be..

Q What proportion do you think of the water that went out?

A I don't know; I haven't figured it out.

Q Was it as much as 25 per cent?

A I would doubt it, but I don't know. What's the use of guessing?

Q Whereabouts do you think that water went out.

A It would naturally fill up over almost as high as to go over the ridge to the east, apparently, before it would flow

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out much to the west. I mean east into Lone Star basin. But it might not have done that.

Q Do you think it went out under the ridge?

A No, I don't; not under the ridge directly.

Q At that time you say it came out on the surface. Is it your opinion that there wasn't any water down at the depth to which the wells in [illegible] penetrated?

A There certainly was some.

Q How deep do you think that -- do you think there was a channel there?

A I think there was a streak of gravel that furnished water.

Q How deep do you think that streak of water was saturated?

A There is a record of that well; I don't know what it is.

Q Do you think it was saturated the full depth of that well?

A There were streaks in between. We struck clay and gravel both.

Q It was streaks with an interruption caused by the clay that you speak of?

A And of course that wouldn't have continued over at that depth of the mud hill, or the water would not have been under any weight or pressure to throw it up above.

Q Then you think whatever water there was at that depth there either stayed there or was forced up to the surface?

A It was certainly drained off somewhere, or it worked itself out.

Q I don't think that quite answers my question. I will

make that clearer. At the depth struck by the Stowell wells in 1896?

A Yes. It either staid there or was forced to the surface because it didn't have a free out-let. There might have some of it worked out below.

Q Do you think any considerable quantity worked on through

A Not very much I don't think.

Q How deep in your opinion did the saturated mass extend or the saturated stream, if you call it a stream, where the 16th street wells are now?

A I only judged from the depth of the wells themselves. Some of them are as deep as 700 feet.

Q Did any of them get to the bottom of the saturated mass?

A I presume not, although I don't know that.

Q In your opinion does the saturated mass extend deeper than that?

A I simply don't know anything about it. It has not been tested to prove it.

Q Taking that depth, and assuming that the saturated mass extended to a depth of [illegible] feet, do you think the water at the lower levels was in motion at all?

A It might have been in motion. If not in motion, it must have been through very heavy material, so that it would not been motion -- it was very slight, otherwise it would have simply gone on and soaked its way.

Q Do you think that the water at the lower levels found an exit at all?

A I don't know anything about it.

Q At what depth do you think the levels were which did

find an exit?

A I don't think anything about that. The records show here plain enough that there is water about 200 feet below the surface in the Bourwine shaft, and yet you go over east a thousand feet or two thousand feet, and formerly before the Eddy tunnel was dug it was within ten or twenty feet of the surface, and if you went north two thousand feet you could get water at sixty feet, according to the testimony.

Q Whose testimony?

A Mr. Trask's.

Q Whereabouts?

A Experimental shaft No.4.

Q At the Boutwine well, how deep did you say the water was ?

A 176 feet, I think it was.

Q At what elevation did the water stand there?

A It is shown in that little exhibit that was introduced yesterday -- a little tracing.

Q Is it your opinion that there was a saturated streak extending through the Red Hills there on the west side anywhere near the surface.?

A I haven't said so; I don't think so. I don't want to say that I don't think it is saturated. I mean the water is not moving.

Q Is it your opinion that there was a streak saturated sufficiently for movement below the surface on the east side?

A North and south?

Q Yes, sir.

A It couldn't have been much motion very far below the sur-

face, or it wouldn't have forced the water up into the cienegas.

Q What is the lowest point in your opinion, the greatest distance below the surface on the east side, at which there was a streak extending through the Red Hill carrying water in movement?

A I don't see how I can give any opinion at all. I don't know.

Q Do you think there was such a condition existing as far as 50 feet below the surface?

A I haven't said that there was any streak conveying special amounts of water below the surface through the Red Hill.

Q Do you think any water was passing through on the east side clear through and below the Red Hill at any point below the surface?

A If the water ever got down into the body of the water as far as the Haskell wells, and rose high enough in the ground, it would come out there on the surface, as shown by the cienegas right down below it; and if it was forced over anything, it might be forced over the ridge on the east side or nearer the west side. I don't know which is the highest in the ground.

Q Is it your opinion that no waters went through the Red Hill on the east side, at a distance more than 10 or 15 feet below the surface?

A I don't know that it is.

Q You ~~xx~~ consider there is a barrier to the passage of waters on through, on the east side of the Red Hill, which raised practically all the water to the surface?

A I do.

Q And that that condition also existed on the west side?

A Undoubtedly, or else they wouldn't be there.

Q And that there was no free movement of waters through the Red Hills excepting on the surface?

A I think that is correct; no free movement.

Q And if any considerable quantity of water was passing out of the land north of the Red Hills, it must have passed out at some other place?

A It might have passed over to the east. That might be lower. I cannot tell. It might have passed to the west also. No statement was made by me that I didn't think it does flow east or west. It is that the main out-let of the water, shown by all the 20 or 30 years' experience, has been through the Sandy tunnel division or the creek division.

Q And that the main out-let of water was an out-let which brought that water to the surface and made it ~~available~~ visible on the surface?

A Certainly.

Q And which was measured?

A Yes, sir.

Q Practically all of the waters passing out from the lands above the Red Hills appeared upon the surface?

A I didn't say appeared on the surface, but practically all the water before the wells or tunnels were commenced there, did rise in springs and cienegas on the surface.

Q And you say that in a state of nature, there was subterranean waters, passing from above to the lands below?

A I didn't say there wasn't any; I say if there wasn't any obstruction beneath the surface the water would not rise in the springs around the Red Hills, because it would keep to the west and go out that way.

Q There was a great obstruction at the Springs at the Red Hill, and at the Eadie tunnel?

A Yes, sir; there has to be an obstruction to the west or it couldn't get there.

Q If there was an absence of obstruction either on the east or west side, the water would naturally pass through that place would it not?

A If they were lower than the Red Hill they would. The Red Hills are in the main channels of the stream of water coming down that way below the surface; there being an obstruction of the Red Hills, if there was an outlet to the east or west the water would have worked that way.

Q Ofcourse the Red Hills would turn the subterranean waters, just as an obstruction in the stream would turn the surface waters?

A Certainly; yes, sir.

Q To what distance do you think the obstruction of the Red Hills extends to the east from the Cucamonga Springs?

A Well, there is some barrier, you can call it what you please, I think the main barrier, or a continuation of it, on the east of the Y tunnel about a thousand feet, extending northerly and westerly from that, between the wells numbers 5 and 6 of the Lone Star wells; I think that is there from the

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evidence produced here.

Q Doesn't that barrier extend east, below the Old Settlers' well, and the Sunset wells, and the Johnson well, and the Hermosa wells, which produces the water there?

A There is certainly something there so that at the Old Settlers well, you can get water 25 to 30 feet below the surface, and if you go a mile below there it is 150 feet; that means that something must throw it to the surface there.

Q There must be a barrier in that direction. Now, going to the west, what evidence of a barrier is there, after you leave the point south of well number 1?

A I think experimental shaft number 4, is the last evidence we have there, that I know of; that is in the case at least, or that I know of personally. If it was all open, and there was no barrier, why would the water stand in well number 1 so high,- why wouldn't it go out?

Q Wouldn't it do that because of the barrier, extending some little distance to the west, around that well number 1, would keep up any subterranean waters which were held and diverted by that Red Hill?

A I don't think so. It would not stand it up so high there, more there, and there wouldn't be a slope from well number 1 through all the system of wells to the east, if the natural outlet was to the west.

Q Is there anything in the Sourwine well, indicating the indication of a barrier at that point?

A Indicating a barrier above that point, because it is so deep to water in that well,- indicates that it is below the barrier I would think.

Q Why doesn't it indicate a rapid drop of the water-plane at that point?

A Because the waterplne from well number 1 on a straight line to the Sourwine well, would not drop as fast as that, and stand your height in well number 1, when it had such an outlet, and yet fall so gradually to the east where it does fall, if there was not something obstructing it.

Q If there is no obstruction between the Sourwine well, and well number 1, there is a rapid drop of the water plane to the Sourwine well, isn't there?

A Certainly there is.

Q How do you determine the direction which water will flow? You speak of the direction of the waters flowing from this water that is diverted from the San Antonio Canyon: The flow of that you would expect to be harmonious with the surface?

A The general tendency of underground waters is to follow beneath the surface stream; that is all I mean.

Q How do you determine the direction of surface drainage?

A By the fall first, and then actually on the ground by the results of seeing the washes.

Q Supposing there were no washes, and we wanted to determine which way the surface would drain?

A Water will move, going to the steepest incline.

Q That is true, either of surface or underground water, in the absence of obstructions?

A Yes, sir.

Q You recognize the fact that a map, showing hydrographic curves can be drawn, determining from different wells the direction of the waterplane?

A Under certain cases, with enough data.

Q And in what way is the proper rule for doing that?

A Why I think you draw the water on the map - a straight line, between two equal elevations of the water, as determined by certain wells or springs or openings or tunnels, or wherever there is water and so on.

Q If you wanted to determine the course of a surface drainage, you would determine it by considering all the points in all directions from the place that was to be drained, wouldn't you?

A I think you would.

Q And determining underground movement, you would desire to ascertain in the preparation of a hydrographic map such as I speak of, the elevation of the water plane at all of the points surrounding the point from which you desired to determine the direction water would take, wouldn't you?

A I would try to.

Q Why have you undertaken to show the direction of the water plane by the production of a map here, which shows the slope only to the east?

A Because that was the series of wells that we were showing. And then I have not shown the waterplane; that is an east and west line, as I told you to start with; I stated that was an east and west line.

Q Well, is a determination based upon a single line in one direction, a satisfactory determination of the way in which, or even tend to show the way in which the water will flow, from a point, any more than it would be a satisfactory way to determine the drainage on the surface from that point, by showing a slight drop on the surface, without regard

to how rapid the drop was in other directions?

A If you will look at that map, it shows number 9, or 14, which is half a mile south, nearly, south of San Antonio well number 3, and shows the surface of that as well as the other; there is no question, as far as the flow of the water underground, that it is faster toward the Eddy tunnel or springs, than it is in the direction the map is drawn.

Q Where do you show number 9 here?

Mr Britt: Call it number 14.

A Here (Indicating on map.) The water elevations show on the several different dates that they are taken, that it corresponds with the elevations of the water in the other wells.

Q You have shown an elevation of the water in well number 9 or 14, in 1900, at 1402: where is the elevation of any of these other wells shown at that time?

A The nearest elevation we have is when I have shown in 1900, elevation of well in well 14 & elevation of water in well 14, 1379.6; that is August 6th, 1900; the nearest other date we have to correspond with that is Mr Finkle's measurement in January, 1900 - there is no date given, when the San Antonio well number 3 was 1402.9, and it is almost directly north from well 14.

Q How far is well 9 or 14 from the well number 3?

A Something about 2000 feet or a little over.

Q How far is well number 3 from Haskell well number 7?

A That is something over 3000 feet.

Q What is the difference in elevation between well number 3 and Haskell well number 7?

A That same dateis given by Mr Finkle; there was a difference in elevation of those two wells of 11.6 feet.

Q What was the difference in elevation between well number ~~xxxxx~~ 9 and well number 3?

A All I have on that is those ~~x~~ two dates; January, 1900 is the well number 3 date, and August 6, 1900, is the date of the elevation of well number 9 or 14; and the difference between thes is 23.5 feet for those dates.

.Q About what is the relationship as to the fall, comparing the distance and fall from well number 3, to the Haskell well to which you have referred, and the distance and fall to well number 9, from number 3?

A About twice as much grade, between well number 3 and number 9,

Q Twice as much? It is more than that, isn't it?

A I don't think so?

Q The difference in elevation is twice as much.

A Oh no. It is whatever figures show that I have given. Yes, it would be nearer three times as great; nearer than twice.

Q Now, you have stated the opinion that there is a barrier extending there in the Red Hills, which tends to bring the waters up so that the outlet was by the surface flow; that barrier was operating upon number 9 ofcourse, and affecting its elevation?

A It could not be entirely operating on number 9; it would affect its elevation ofcourse, but at the time that number 9 was given, the Lacy tunnel was opened right below it; whether that water raised as high as it would otherwise, I don't know;

I doubt it very much; because it would have been higher, if it had not been for the opening of other wells bored prior to that, and the Eady tunnel was within two or three hundred feet of it at that date.

Q It was not cut through?

A Oh no.

Q You had the effect of the barrier except as to the motion there may have been between the Eady tunnel and that well?

A And the other wells bored down below; Stowell number 4 and number 7 and 8, that were bored down below, two to six hundred feet, coming up into the Eady tunnel.

Q This well was not connected with anything?

A No, sir.

Q And it was right in that region where one well stood 80 feet above another, at one time?

A One particular well did.

Q Have you anything to show whether well number 9 at this time was in the same strata with these other wells?

A Nothing special to prove that, except general.

Q Your opinion was that the two wells 80 feet apart were in different strata?

A They were not cut into the same strata at the same depth.

Q The strata that one was cut into, and the strata that the other was cut into, were clearly different strata?

A Yes, sir; they must have been; one well was 200 feet deeper than the other.

Q But they were necessarily in different strata?

A Necessarily.

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Q Without a connection between them?

A No close connection more.

Q Now returning again to the Dourwine well, shown on this diagram, what was the difference in elevation between the Dourwine well and the well No. 1?

A Do you mean the water elevation.

Q Yes, sir.

A Dourwine well was 1176 feet above sea level on the date that is given on this, San Antonio No. 1 was 1419.5, making a difference of 243.5 feet; that is the difference between the water elevations.

Q Then if the water plane of the Dourwine well had any connection with the water plane with well No. 1, the drop was vastly more rapid than either of these other drops?

A If there was a straight line opening between the two, it certainly was.

Q And if no barrier existed between it and the lands above the escape would necessarily be from that point,,would not it?

A It would flow more freely that way, where the greatest decline was.

Q The tendency would be for it to flow very largely that way?

A Yes, sir.

Q And if the barrier extended to a point near the Dourwine well, it would serve to a considerable extent to the preservation of the water in well No. 1, wouldn't it?

Mr. Stevens: What Dourwine well are you talking about?

Mr. McKinley: I am talking about the Dourwine well shown

on the witness's diagram, of which he has just given the elevation, the one nearer to section 4, as shown on diagram plaintiffs' Exhibit 83?

A I think I will answer that yes, if there was a drop there, it would tend to cause the water to raise in well No.1 I want to state if you put the same question as between well No.14 and the Sourvine well, why shouldn't it flow right over that way directly? There is a couple of hundred feet difference there too.

Q Do you believe that No. 14 is below the upper edge of the barrier made by the Red Hill formation, or is it included in the Red Hill formation?

A It is included in the Red Hill formation; that is, it is above the barrier; the barrier is below 14.

Q Entirely below?

A Well, a large portion. I guess it is below without question, or else the water would rise there,

Q What do you think is the form of the barrier? Straight across there?

A No, I do not.

Q What form does it exist in?

A All I could judge from is where it throws the water to the surface and prevents it from escaping. If it was in open ground or gravel beds the water would not raise to the surface; that is all I have to judge by.

Q Where the water appeared on the surface in times before these developments and before the drouth, did the water appear entirely above the Red Hill formation or in the Red Hill formation?

A I think mostly in the Red Hill formation.

Q Then the barrier existed both above and below some of those springs, didn't it?

A That is, the Red Hill formation, as shown on the surface, I think was originally higher up than any of the cienegas. I don't know of any cienegas higher up than some of the Red Hill formation originally.

Q Have you ever known the cienegas when they extended clear up to the Red Hills?

A Yes, sir.

Q Did you ever know or see the signs of the cienegas up on top of the Red Hills, between the east and west sides?

A It wasn't on top exactly, it was to the side, as far as elevations go. I can show where it was on Exhibit 1.

Q Well, I wish you would show that.

A Well, it is already marked on Exhibit 1 elevation of 1360 to 1370 feet.

Here the court takes a recess until 2 o'clock p. m.

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AFTERNOON SESSION 2 o'clock p. m.

Mr. Conner: I stated the other day that I rested in the Hermosa case. I have been considering the case somewhat, and I have come to the conclusion that I would like to ~~amend~~ amend the answer of the Hermosa Water Company to conform to the facts that have been proven. Those tunnels in Deer Canyon were something I had never heard of until they came out here in evidence, and it appears they cut enough figure to look at them a litile; I would like to amend my answer so as to include those tunnels with the Deer Canyon. This application would have been made sooner, but I did not think we were as near the end of the case as we are. All the amendment I want to make is to include the water flowing from those tunnels.

The Court: Is there any objection to the amendment proposed?

Mr. McKinley: W e have none.

Mr. Conner: I have spoken to Mr. Waters and Mr. Haskell in regard to it, but I have not had an opportunity to see Judge Britt.

Mr. Stevens: I don't think we have any objections to that amendment.

The Court: You may present the amendment when it is prepared.

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C. E. JOHNSON.

C. E. Johnson, previously sworn, being recalled by the defendant Cucamonga Water Company, testified as follows:

Direct Examination.

Mr. Goodcell: Q Do you know the two wells of the Cucamonga Water Company on the 90-acre tract that are near together and a short distance to the east of the Day tunnel?

A Yes, sir.

Q And which have been connected with the Day tunnel by a branch tunnel?

A Yes, sir.

Q You became manager of the company, if I remember, in 1902?

A Yes, sir; December, 1902.

Q What is the condition of those wells at this time as to being connected with the Day tunnel?

A There was only one connected at that time, being the most westerly one, the one closest to the Day tunnel.

Q How was that connected with the Day tunnel at that time?

A By a drift from the Day tunnel, off to the east, in an easterly direction to the well.

Q On the same level as the floor of the Day tunnel?

A Practically on the same level.

Q Was that well at that time sunk down so as to flow into that drift?

A Yes, sir.

Q Do you know when that had been done?

A I have no date of that, only it was a short time ~~after~~ before I went on.

Q You became zanjero in December, 1902, you say?

A Yes, sir.

Q It was some time prior to that that the connection had been made?

A Some time prior to that, yes, sir.

Q Did you make any measurement of the quantity of water being discharged from that well into the tunnel?

A Yes, sir.

Q Have you any memorandum or recollection of what that measurement was?

A I have no memorandum; the best of my recollection is, there was something a little over one hundred inches of water from the well at that time.

Q And the farther one was not at that time connected with the tunnel?

A No, sir.

Q Was it afterwards connected with the tunnel?

A Yes, sir.

Q How did the flow of the two wells compare? Which was the stronger flow?

A The most westerly well was the stronger, the one nearest to the tunnel.

Q The one that was cut in first?

A The one that was cut in first; yes, sir.

Q Can you state about what flow was obtained from the more distant well after it was put in?

A There was apparently an increase of 50 inches as near as we could measure it; there was some water coming in from the sides of the tunnel at that time, and it was pretty

hard to make an exact measurement of that distinct well.

Cross Examination.

By Mr. Frith: Q What particular wells are you speaking of?

A The two wells practically at the head of the 50-acre tract of the Cucamonga Water Company.

Q Do you know when those wells were sunk?

A The one nearest the Eddy tunnel was sunk prior to my coming on in December, 1902. The other one was put down under my supervision, or partly so. It was located November 1st, 1903, and connected up February 27th, 1904.

Q What do you mean by its being located? Do you mean the spot for its excavation was designated and pointed out?

A Yes, sir.

Q That was in November, 1903?

A November 1st, 1903; yes, sir.

Q The boring began about that time?

A Shortly after.

Q And finished when?

A The well was connected up to the tunnel -- I don't know just what time the well was finished -- the connecting up to the tunnel was made the latter part of February; February 27, 1904.

Q How far was that well from the tunnel?

A That was the end of that drift at the Cucamonga Water Company, and head of that short tunnel.

Q Yes, but how far from the Eddy tunnel?

A I believe it is something over 80 feet; between 80 and 90 feet, although that I couldn't swear to as the exact dis-

tance.

Q How was that well designated by the Cucamonga Water Company, the one that you are speaking about last, that was connected up you say in February, 1904?

A I don't know whether there is any number shown on any of the maps or not; I couldn't say; I always designated it myself as No.2.

Q You don't know whether the company called it by that designation?

A I do not, no sir.

Q Now you say that there was another well which you knew something about in December, 1902?

A Yes, sir.

Q Where was that situated, with reference to the Lady tunnel?

A Well, that was the one that was nearer to the Lady tunnel, a shorter distance.

Q What was the condition of that well at the time you became zanjero in 1902?

A It was a completed well, a flowing well.

Q Flowing where?

A Into the tunnel.

Q What sort of connection was made?

A There was a cut made in the 13-inch casing, and from that the water flowed into the tunnel at tunnel level.

Q Through what?

A Through a tunnel.

Q Are those two wells on the same side of the tunnel?

A Yes, sir; that is, the same side of the Lady tunnel.

Q Did you make any measurement of the one which was connected with the tunnel at the time you went there.

A Yes, sir.

Q Did you preserve a record of the measurement?

A No, sir, I did not.

Q You say that it flowed about 100 inches?

A Yes, sir.

Q Was your attention ever called to the quantity that it flowed afterward by any particular circumstance?

A Yes, sir, I made various measurements of it.

Q Did you keep any record of that?

A None, only what I have turned over.

Q What did you call the weir, where you measured the flow of water from that well?

A It was just a temporary weir at that time. We had no number to the weir.

Q Did it ever have a number?

A Not that particular weir that I know of, unless Mr. Marsh measured over the same weir later on; the weir was replaced as the weir washed out several times.

Q Now as to the second well, the one that was connected in February, 1904?

A We had no weir at that particular point.

Q Where was the water measured from that well?

A Over the same one. The first one was measured over the same weir that that one was.

Q Did you make any record of the measurements that you took of those two wells?

A I turned it over to my successor, but I don't know what

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has become of the measurements.

Q At the time that you say you measured 100 inches flowing from this well, was it a new well, newly cut, how long had it been discharging? Do you know anything about it? The first well I am speaking of.

A Well, to the best of my knowledge, it must have been cut several months, perhaps earlier than that, ahead of my coming on with the company.

Q You say to the best of your knowledge: Have you any knowledge on the subject?

A Not any definite, no; I couldn't say as to the exact time that was cut before I went.

Q Were you present when the well was being bored at any time?

A Just in passing, was all.

Q Passing what?

A Passing the well.

Q Do you know what depth it had reached, when you were passing, what progress?

A No, sir.

Q Then you have not any definite knowledge of the well at all before you became zanjero?

A No, sir.

Q That was in December, 1902?

A December, 1902.

Q How long after you became zanjero before you made this first measurement?

A Shortly after.

Q How long did you continue to make measurements afterwards: a year or two or three?

A Yes, sir.

Q Whatever record you made, you delivered over to Jordan, did you?

A Yes, sir.

Q The second well, I believe you said, flowed about 30 inches?

A Yes, sir.

Q Did you notice any change in the quantity of water flowing from the two wells from time to time?

A Yes, sir.

Q What was the change?

A There was a decrease.

Q Did the water from the two wells come together before it entered the tunnel so that it could all be measured at one place?

A Yes, sir.

Q One of them was about [illegible] feet from the Daly tunnel, and the other was about how far?

A I couldn't say as to the distance; it should show up on the map, the exact distance; I don't remember the distances.

Q Were these wells cased with steel pipe?

A Steel casing, yes, sir.

Q They were not capped, were they?

A We attempted to cap the first one, but the second one was never capped.

Q You didn't cap the first one then?

A No, it was an unsuccessful attempt.

By Mr. Goodcell: Q You say that the discharge from that well nearest to the tunnel was about 100 inches. Can you state definitely from your recollection whether it was more or less than 100 inches?

A To the best of my recollection, it was a few inches above that, but I don't know how much; a very small amount above that.

Mr. Britt: Q To what extent did they decline; how much did the flow of water fall off in the two?

A To the best of my recollection, that first well went down to in the neighborhood of 85 or 87 inches that season; that is, the season of 1903.

Q What about the other one?

A I never made any accurate measurement of that separate from the other, after that first time that I measured it, after it was cut.

Q Did you measure any other wells of the Cucamonga Water Company flowing into the Baldy tunnel?

A Yes, sir.

Q At the time you became zanjero, or shortly afterwards?

A Yes, sir.

Q Do you remember about what they measured?

Mr. McKinley: Objected to as not cross examination.

Mr. Britt: We would like to know what other wells were discharging into the tunnel at that time on the property of the Cucamonga Water Company, to illustrate at any rate what quantity of water that company was getting from that source.

The Court: His examination in chief was simply as to the

two specific wells.

The Court: The objection is sustained.

Mr. Pritt: Exception.

Q How did you ascertain that there was just that quantity from those two wells? Did you measure it in conjunction with any other wellsx, measure the water in conjunction with any other wells flowing into the tunnel?

A Not in conjunction with those two; no, sir.

Q Did you measure those two entirely separate from any other?

A Yes, sir.

Q All the time?

A Well, I have measured the others, the total flowing out of the tunnel, but I have none of the measurements only what have been turned over.

Q Well, did you know the total amount you measured flowing out of the tunnel in that season, 1903?

A I don't believe I could state anywhere near accurately the amount of water that was flowing out at that time, no sir.

Q You did measure the quantity flowing from the tunnel off of the 90-acre tract?

A Yes, sir.

Q Did you measure it pretty frequently?

A Yes, sir.

Q And you can't remember what it was, the full amount?

A No, sir.

Q Did you get more than 150 inches in measuring the whole, or less than 150 inches?

A I made so many measurements it will be pretty near guess work to guess at that particular season; I don't believe I could state within ten inches of the amount.

Q Can you state within ten inches of the amount?

A I would say 130 inches.

Q That was about the extent of it, was it?

A I couldn't say whether it was more or less than that.

Q It would not vary more than ten inches from that?

A No, sir.

Q That was after this second well had been connected with the tunnel? The well which flowed about 30 inches?

A Yes, sir.

Q May it have been materially less than 130 inches?

A I believe it was more than that in place of less, to the best of my knowledge.

Q At what time?

A That was in the fore part of 1904, after the well had been cut.

Q It declined from that, did it?

A Yes, sir.

Q About how much?

A That I couldn't state, as to that particular season.

Q Do you know how much the out-put declined at all, that season or any other?

A It declined quite materially.

Q Do you know to what extent?

Mr. McKinley: Objected to as not cross examination.

The Court: Sustained.

Mr. Britt: Exception.

Mr. Goodcell: The defendant, Cucamonga Water Company rests.

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E. T. WRIGHT.

E T. Wright, previously sworn, recalled for further cross-examination, testifies as follows:

Cross Examination.

Witness: I want to make a correction of a statement that was made this morning about well No.14, about the elevation of the water on August 6th, 1900, as that elevation is intended to be for well 3; they are right close together there on the diagram, and this line it is run across the line by mistake of the draughtsman, so it does not apply to well 14; we have no measurement of that well in 1900; it was not started until 1901.

The Court: Q You are referring to what diagram?

A Plaintiffs' Exhibit 84. That would simply change the entire effect of any examination on that particular well. You see they are close together on the map, and the draughtsman slit it across.

Q Do you see any elevation of that well here?

A There are several elevations of that well in later years.

Q What is the first elevation there?

A The first elevation is the floor of the tunnel, April 10th, 1906, the earliest elevation.

Q Then you haven't any elevation of that relating to the date of the elevation in well No.3?

A The nearest I could give that is from Mr.Stowell's testimony, that the water stood between 35 and 40 feet below the surface when it was bored. And that would be about

the same point we were examined upon this morning; that is I think it would be about the same point, but there is a difference of about a year and a half in the date there.

Q It would be a year and a half later?

A Yes, sir.

Q While the elevations were getting down all over, so it was a little higher before?

A Undoubtedly it was higher before; it would seem natural yes, sir.

Q Do you know what the elevation of that well No.3 was at that date?

A No, sir, I have no record of it at all.

Q Do you know as to any elevations in that vicinity at that time?

A I think we have no elevations given in the record of any wells, except between 1900 and 1904.

Q Then well No. 14 is of no particular significance on this diagram?

A Only as showing the level of the tunnel and the water as backed up by the effects of the bulkhead.

Q You have not drawn any lines to this well, or anything of the kind, showing directions?

A We did not think this pertinent to the other wells; at least I didn't.

Q You think the only way to determine the way the water-plane slopes is to take elevations on a line running to the east?

A I don't think that is done for the purpose of showing that is where the supposed slope of the water plane is.

That is put on there to show the sympathy of the water in the various wells, and in doing that it does show that it slopes to the east.

Q Under the guise of showing the direction of the water-plane you introduced it in rebuttal, for the purpose of showing the symathy between these wells: That is correct I suppose?

A It may be so; I don't know; certainly it shows that the water would flow to the west, as far as it goes.

Q It don't show anything about any of the elevations to the west?

A We have elevations as far west as well number 1.

Q But you have no elevation beyond that?

A Not on that profile.

Q Nor elevations to the southwest?

A Not on that profile. Except as the Lady tunnel is shown, the elevation of that, by being bulkheaded.

Q There is no elevation that shows the water would not flow to the southwest?

A No, sir.

Q Nor in any direction, except west from 2 to 1, and east from 1 in the other direction?

A West from 2 to 1? No, sir; east from 2 to 1.

Q Yes, west from 2 to 1, certainly.

A Well, it does not show the water would flow west.

Q 1 is the furthest west you have shown?

A Yes, sir.

Q That is not any indication of whether the slope is southwest or not is it?

A There is no indication on the diagram that it is west

from there; it don't show any more elevations; it shows an east and west line, for a mile or a mile and a half north of the Base Line, west from number 1.

Q Then practically the diagram is valueless as tending to show the slope of the water-plane, and is only useful as showing the sympathy of the wells?

A I don't think that; I think it shows that water would not naturally flow to the west, say from the Haskell well number 7, it would have a hard time getting west, unless the plane descended rapidly from 1 as you went a little south; if it did, there would be a slope in that direction to the west instead of to the east.

Q There is not anything to show whether it would flow southwest or not?

A There is not anything to show on that map that it could not go southwest, on that map alone, but the tendency is to show that it goes southeast.

The Court, Q What is there on the map to show that it would go to the southeast rather than to the northeast, Mr Wright?

A The elevation of the water in the tunnels, the adie tunnel, and the elevation of the Lone Star system, which is south of this tract, by a good ways.

The Court, Q That does not show on the diagram?

A The diagram shows the elevation of the well K, which is some south, and also well 5 of the Lone Star system, which is south on an east and west line.

Mr ritt: How about the Hellman well -

Mr McKinley: I think I should be permitted to cross-examine the witness without interruption from counsel.

Mr McKinley, Q What has well [illegible] got to do with it?

A It is shown on that map.

Q It is in an entirely different waterplane isn't it?

A I think so; I think that the map shows it so.

Q Well, it has not anything to do with determining the direction of this waterplane has it?

A No, I don't think that practically any of the water from the other water plane gets over into that.

Q Well, then well [illegible] should be dropped out ofthe consideration shouldn't it?

A No more than any other of the wells to the west had; it shows the slope of the water from one to the other; although I have expressed an opinion that I believe the water does not go there, and I believe that.

Q The direction of the slope of one water plane, is not indicated by another waterplane is it?

A As a rule, not.

Q Now, you have spoken of a difference in these waterplanes and have drawn a line between well 6 and well 5: What was the original elevation of well 5 as compared to well 6?

A I don't think that I have any record of that.

Q As a matter of fact hasn't the elevation of well 5 been pulled down about 100 feet by the Lone Star?

A Not perhaps 100 feet, but pulled down a long distance.

Q Then its present elevation is not any particular guide as to which waterplane it is connected with?

A No, not that; I think not.

Q Are there not other wells in the far eastern group that have been pulled down by the tunnel, the Lone Star tunnel?

A The wells on the 35-acre tract, when that bulkhead is open are lowered by a small amount than they were when they were out; they never did rise much above the tunnel, but they rose so they were flowing wells to start with, but how much higher than the floor of the tunnel I couldn't state.

Q How does the elevation of the floor of the tunnel, compare with the elevation of the water in the Sunset wells?

A The floor of the tunnel is lowerthan the present elevation of the water in the Sunset well, or any record that we have of the elevations of the Sunset well.

Q Prior to the bulkheading of the tunnel had it in your opinion any effect on the Sunset well?

A Yes, sir; I think so.

Q And pulled down its waterplane?

A To a certain extent.

Q Then you have to take the tunnel into consideration in determining whether the Sunset well is in a separate waterplane or not?

A I hardly know how to answer that question; I believe they are in the same waterplane as far as that goes; I hardly know how to answer that question.

Q Is the tunnel seriously affecting the water in the Sunset wells?

A How seriously I don't know; but evidently the drainage area would be down in that direction someway, if the tunnel was kept open all the time.

Q Do you believe it substantially affected the level of the Sunset wells?

A It is hard to tell; this tunnel was built years before

the Sunset well was bored; two or three years before the Sunset wells were bored that the tunnel was built.

Q When was the tunnel built?

A It was finished through the 35-acre tract in the early part of 1900, and they were working on it that season, and they started it in 1899.

Q When was the rest of it finished?

A The balance above the Base Line was not completed until nearly 1904 I think, before they completed it clear through to number 5.

Q The Sunset well was put down in 1901?

A I think so; I think that is the record.

Q You have spoken of the diversion,- of the spreading of the storm waters by the San Antonio Water Company, Storm watess of Cucamonga Creek by the San Antonio Water Company: How frequently did thestorm waters previous to that diversion, in your opinion, cross the Base Line?

A Why, it would only be an estimate from what I have noticed myself, because I was not there every rainy season, by any means, when it has passed; some years it did not cross at all; but those were the dry years; during the ordinary wet winters I should suppose two to three or four storms during the wet winter, it might cross the Base Line for a short time.

Q Was there such water carried across there?

A I have seen a pretty good sized stream carried across there; I remember only once I ever saw a good stream, and that was some years ago.

Q Now, since these diversions these waters do not cross

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there?

A They certainly did the past winter, within the past ninety days.

Q When?

A One of the storms this winter went clear across to the Base Line.

Q How long ago?

A It was just before, if I remember right, this trial began, or else it was in January of this year, or in March since it began, this time.

Q Was there a large amount of water went across there?

A I could only tell you by hearsay, from a statement made to me, because I did not see it.

Q Now, do you think any real considerable amount of water would have gone to the lands of plaintiff, that did not get there on account of these diversions?

A I don't know how serious the diversions have been.

Q Assuming that the storm waters are generally diverted, and that the storm water is spread out, over the lands, below the Cucamonga Canyon there, do you think it would make a serious interference with the waters on the lands of the plaintiff, and the Springs and the Y tunnel?

Mr Britt: Objected to on the ground that it involves a false assumption, in that it assumes that the storm waters are generally diverted and spread out.

The Court: Overruled.

Mr Britt: Exception.

A I think that it would do the plaintiffs in this case - that if I owned the 526.97 acre tract, I would consider it

a damage to have the waters spread in from the easterly channel over towards the westerly channel.

Q Well, do you think that substantial at all? Do you think that it substantially reduces the amount of water sinking into the plaintiffs land?

A It depends on how much they diverted.

Q Well, assuming as has been testified here, that the water was generally diverted,- you have heard all of the testimony in this case?

A Yes, sir.

Q Assuming the facts as contained in this record, as to the diversion, do you think that that would amount to anything in reducing the amount of water in plaintiff's land?

A Yes, sir; I presume it would amount to something; I don't think it would be possible to state the exact percentage of the amount; I think it would amount to a damage, because there would be more water sink into the gravel a mile or two miles above their tract, if it was left alone, than there would in the present condition if it was diverted as I stated.

Q About how much do you think it would affect the supply of the water on plaintiff's land?

A Well, as I before remarked that would depend on the amount diverted.

Q Well, assuming the amount you have heard here, stated in the testimony, inregard to the diversion?

A I couldn't give you any percentage; there has been no percentage given of the amount diverted, in the testimony; they simply diverted the waters to the west.

Q You know that the testimony has been that the storm

water has been generally diverted, and very little of the water permitted to cross the Base Line.

A None of it permitted to cross the Base Line?

Q Well, I will say none of it permitted to cross the Base Line.

Mr Britt: Objected to as not founded upon any evidence in the case.

Mr McKinley: This is cross examination and it does not have to be founded on the evidence.

The Court: But in a matter of this sort unless it is founded upon the evidence, it does not help to illustrate the question you are inquiring about.

Q Well, taking the elements, as you have heard them in the testimony here, what in your opinion has been the reduction in the amount of water going to the plaintiffs' lands?

A Well, I think it is foolish to make a statement of percentage of water, when I know so little about it.

Q Well, taking the testimony as true, do you believe the amount of water coming to the land of the plaintiff would be materially reduced?

Mr Britt: Objected to on the ground that it is indefinite as the testimony to be taken as true is not stated.

The Court: I think there is no controversy as to what is meant here,- the record in the case. Overruled.

Mr Britt: Exception.

Mr McKinley: Certainly; the record in the case.

A I have stated that I thought it would do a damage, and it would furnish less water under the immediate place; how much less, whether 5 or 10 or 15 percent. I don't know.

Q Well, is it materially less?

A Well, I don't think I will try and answer any closer than that.

The Court, Q You do insist it would do some damage?

A If they divert the water from the east to the west side, it would do damage to the plaintiff's land; not probably to the whole body of water; it might still get through the Eddy tunnel or something like that; it might not do damage to the whole body of water, but to plaintiff's land is what the question was.

Mr McKinley: If it does do a damage to plaintiff's land, then that is a factor to be taken into consideration in determining the reason for the depletion of the Springs and tunnels on plaintiff's lands, isn't it?

A Possibly; I had not ever considered it so; I had not thought of it in that light.

Q That is a factor that you have not considered at all?

A I have not, as far as making up my estimates, as to the supply of the water on the 526 acre tract; I have not taken that into consideration one way or the other.

Q And you have not considered it a matter of material importance in the case?

A No, I have not.

Q You are disposed to think now it may be?

A I don't know how material; I am disposed to think it would divert some water from that immediate basin possibly, if they were successful in what they were trying to do.

Q What is your opinion as to the effect of the [illegible] of the Eddy tunnel, upon the elevation of the 16th street

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wells?

A It assists to raise the water in the 16th street wells.

Q Will it raise the waterplane of the 16th street wells, although it does not raise the water in the tunnel to a point above the elevation of the 16th street wells?

A It certainly will; it certainly assists to do it; it gives a basis for the other water to rest on; it stops it from escaping further in that direction; the figures in the case show that.

Q Are you of the opinion that a raise of 40 feet in the waters of the tunnel would affect the elevation of the water plane in the 16th street wells.

A Give it time enough it will.

Q I thought you just said it would not affect it unless it was up to the elevation of the 16th street wells?

A Oh no; I said the reverse.

(Previous testimony of witness read.)

Q Well, I misunderstood you; now, referring to the proposition of bulkheading the Y tunnel, why do you say that would not be beneficial?

A I simply said so from the character of the soil there, and because of the small depth of area that you could possibly put a tunnel down; it is only 20 feet between the surface of the ground, and the bottom of the tunnel at the mouth, and it is all loose gravel and rock and boulders, and I think it would percolate through the ground and soak itself out in the cienega below it, instead of storing the water as good as it does in the Eddy tunnel.

Q It would soak into the surrounding land there and be

preserved there?

A Whateverit would save, to soak up in the surrounding land, and not waste in the cienega, which would be wasted just the same in the cienega as at the mouth of the tunnel, would be so much benefit.

Q It would tend to make some storage there?

A I think the amount would be small, because when that tunnel is wide open, as it was six or eight years ago, there was always water flowing from the cienegas below the mouth of the tunnel; and the cienegas did not dry up until the tunnel did, about the same time the tunnel dried up, the same season.

Q You say that the rainfall, a heavy rain, would not soak into the tunnel?

A Not in a week, no, nor two weeks, nor three weeks.

Q If the rainfall falling on the surface would not have a tendency to soak down, and would not soak into the tunnel, why would not water in the tunnel be delayed for a considerable time in percolating out?

A The crust is probably a littleharder there, the top of the surface, the few feet may be harder than it is below, and it will percolate out into the cienegas; I know from experience.

Q What sort of a crust is that?

A I don't know whether you would call it a crust; it is the soil that is on top, that you can see on the ground.

Q It is in some degree water-proof?

A I don't think it has the porosity of the gravel underneath there; that is all I meant by that.

Q It has not porosity enough to take up a rain?

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A Yes, sir; it will take up an ordinary rain.

Q You referred to a break having occurred in the casing of the Hellman well, which accounted for a drop of eight feet in elevation: Did you see any break of the casing of the Hellman well?

A No, sir.

Q Did anybody testify here to it?

A No, sir; I don't think they said a break; it was explained on the stand here, a reason for it, trying to give a reason for it, and Mr Purcell and Mr Koebig and myself, all believed it was from the same reason; our belief was that simply there was something that gave way.

Q You all agreed on the expert opinion that if there was a drop, it must be accounted for by a break?

A If it dropped eight feet in two or three days, there must be something underneath give way to let the water get out; just what the break was or what the drop was caused by, I don't know; whether a break in the pipe, or some dirt in the cuts that let it out into the gravels by breaking loose, or something of that nature; that seemed to be the reasonable theory.

Q It was simply a matter of accounting for it, and not any direct knowledge on the subject by anybody?

A No, sir; I don't think so at all.

Q Now, you have introduced here a tabulation showing that the Eady tunnel in 1906, produced more water than in 1905?

A Yes, sir.

Q Wasn't it true all over the country, that the amount of water in tunnels was greatly increased between 1905 and 1906?

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A I think probably that might be true; it was the second year of a good year; I don't know that tunnels did; but I know it was a second good year; and I know tunnels generally do fail from year to year.

Q And wasn't it true that the San Antonio tunnel showed an increase between July 15, 1905 and July 10, 1906, from 199 to 225.1, as testified here?

A If you are reading from the records I presume so; but I don't those tunnels are any comparison; the San Antonio tunnel is receiving creek water pure and simply; you had might as well say to compare it to the Frankish and Stamm tunnel, which has two hundred inches sometimes, and two inches some times; those are both creek tunnels.

Q The Frankish and Stamm tunnel and the San Antonio tunnel depend on natural causes to produce additional water?

A They depend on therains; yes, sir; it is the rains that make the flow of water in the canyon to supply them, yes, sir.

Q And the Eady tunnel must depend on the rainfall also?

A Yes, sir; decidedly

Q And as far as the San Antonio tunnel is concerned, the only distinction that you draw between that and the Eady tunnel is that there were not any wells there at the San Antonio Canyon that stopped pumping, isn't it?

A No, sir.

Q The water in both is due to percolation from the rains?

A Yes, sir; but one had a heavy stream flowing over it; in 1906 they had enough water so that they didn't pump any from the wells on 16th street.

Q Isn't the San Antonio water diverted above the tunnel a

long way, so that it does not run over the tunnel at all?

A Not all of it that year in 1906.

Q It hadn't been done at that time?

A I didn't say that; I said not all of the water was diverted.

Q How much of it was?

A I don't know.

Q You have observed also that the difference in the flow of the San Antonio tunnel, between October, 1905 and October, ~~1906~~ 1906 was the difference between 60.5 on the first date, and 117.4 on the second?

A I haven't noticed it; I don't doubt it at all, if you are reading the testimony.

Q The Frankish and Stamm tunnel has not any stream running over it, has it?

A The Frankish and Stamm tunnel is fed, whenever there is a good year right straight direct from the creek; as sometimes it flows very heavy in the winter, as testified here, 100 and some odd inches, and other times, in the summer, it drops down to two inches or nothing.

Q Have you observed that the flow of the Frankish and Stamm tunnel, on August 6th, 1905, was 28.5 inches, and on July 7, 1906, it was 90 inches?

A I have not noticed those; but look back the year previous with the Sadie tunnel and see how much less there was in 1905 than in 1904, when there naturally should have been fully as much or more; there was but little over half to two thirds in 1905 to what there was in 1904, and the next year it increased.

Q But other wells were cut in during that time, during the intervening time.

A They were cut in February 25th, 1904, that was when that well was cut in.

Q Well, that was what made a difference at that time, wasn't it?

A The wells were flowing into the tunnel before that time; they had been pumped for five months, number 14 had, that was the onlyxx new one cut in, and that had been pumped since the fall before.

Q Were those wells as to which Mr Johnson testified, both cut in the tunnel during the year 1904?

A The first one was; the other one was being siphoned into it all of 1904, until it was cut in February 25th, and prior to that for six months, it was siphoned over into the tunnel.

Q Now, in your opinion is the Lacy tunnel affected by the rainfall of the preceding year?

A Do you mean the Lacy tunnel or the wells supplying it?

Q The wells and the tunnel itself? The flow out of that tunnel?

A I don't know whether it would affect it in one year or not; I don't know whether, if we had a quiet and undisturbed waterplane above it, whether it would affect it in one year or not.

Q You have testified that there would be an effect on the developments on the east side, within six months and more after in the year: Do you think that is true of the developments on the west side?

A I presume it would be as much one as the other; I don't know of any difference between them as far as that goes.

Q Was not the Cady tunnel getting the benefit if not of the rains from the watershed in that short length of time, at least of the rains of the preceding year, on the lands between it and the Base Line, and for a distance up towards the mountains.

A Why most assuredly it helps the tunnels to have it rain above them; all that I have stated is that it don't help them in 30 or 60 or 90 days, from surface rains.

Q Why not?

A I say it does not help the flow of the tunnel by having a rain, so you can see it the next week or two weeks or three weeks.

Q Or thirty days?

A Or thirty days.

Q Or sixty days?

A Or sixty days either

Q And yet you say the effect of pumping the water out of te 16th street wells, is felt in less than that time?

A That is probably a good deal nearer the end of the Cady tunnel or of the Y tunnel than the most of the water that their supply comes from; that is the wells are nearer to the tunnels than where most of the supply comes from.

Q Don't the sources that formerly fed the cienegas and the springs feed the Cadie tunnel now?

A Yes, sir.

Q What becomes of those waters? They go to the Cadietunnel?

A I think they do, except where interfered with from above.

Q The effect on them was felt as quickly as over on the other side?

A In the old cienegas?

Q Yes, sir?

A I think about the same.

Q Referring again to the cienega which we left at the adjournment this morning, I will ask you to mark that on plaintiff's Exhibit 1?

A I will mark that "C".

Q That cienega was surrounded by the Red Hill formation was it not?

A Yes, sir.

Q And was on the hill above - - That is some distance to the east of the Eadie tunnel?

A Five or six hundred feet.

Q To the northeast of the tunnel?

A Yes, sir.

Q During the cutting of the Eady tunnel, from its opening, for a considerable distance, it was dry wasn't it?

A Yes, sir.

Q How far?

A Why, I think my memory is, from 800 to 1000 feet.

Q Then there is no saturated mass extending through that Red Hill?

A Not enough to produce water. I mean on the line of the tunnel.

Q What was the source of the supply of that cienega that we have last referred tomin your opinion?

A It must have got the drainage from above the gravel

beds or ducts as they call them.

Q It must have cut through a duct?

A I presume it did; it certainly did not flow on the open surface.

Q It must have been something in the nature of a duct bringing it up to that point?

A Certainly; there must have been some porous material in which it flowed that way.

Q That was so of others of these cienegas and outcrops of water about the Red Hill?

A Yes, sir; they have to have gravel to work through as much as they did, they must have some gravel.

Q As to how far that flowed through a duct, have you any opinion?

A No, sir; not the slightest, except as they are affected by the lowering of the plane above; I have that much of an opinin, because that shuts them off.

Q Would they be affected by that, or the absence of rains affecting their sources? Have you any means of knowing which itxwas?

A Pretty good evidence I think of what it was.

Q If the rainfall was not sufficient to raise it to that height it would disappearjust the same?

A Yes, if the rainfall would stop it would disappear; but they would return with the return of the good rainfalls for five or years later, which they have not.

Q If the rainfall was continued long enough, and its effect felt soon enough they would have returned, but not otherwise? Isn't that correct?

A Unless they were drawn down by some other operation, but they will never return on that side with the Mady tunnel all open there.

Q Do you mean the portion of the Mady tunnel that was constructed some 10 or 15 or 20 years ago?

A In the condition of it now; all the upper waters are gone.

Q They would not have returned with the Mady tunnel as it was before it was extended off the 90 acre tract?

A Not up on that upper point I don't think; not up on that elevation.

Q Now, referring to your testimony as to the hydraulic head: Is the hydraulic head proportionate to the discharge of the Cucamonga Springs and the M tunnel, the hydraulic head as shown by the 16th street wells and the Haskell wells?

A Does it affect the discharge?

Q No, is it proportional to the discharge?

A I think Mr Finkle stated the correct basis x if the other qualities are proper, as A into the square root of 2 G H; I think that is right.

Q In your opinion is the discharge of the Springs dependent on the hydraulic head, of the 16th street wells and the Haskell wells, or is it dependent upon a large number of othr factors?

A It is dependent on the head of the waterplane above it; and the string of wells there is the only way we have of measuring what the head is.

Q It is dependent on the height of xx the waterplane that supplies it?

A I certainly think it is.

Q And you consider the mode of computation employed by Mr Finkle, the correct mode of ascertaining the relationship of hydraulic head and discharge?

A Everything else being equal I think that is correct; but it cannot be applicable in such a particular case as this, where there is about 60 feet of elevation where the water comes out, and half a mile in area, and when it comes down below the 1360 feet, it is shut off - the open outlet is shut off such as the Y tunnel, and that wipes that out.

Q Ought not a calculation based on the lower levels be accurate, if there was a relationship between the discharge and the hydraulic head of the well as to which it was calculated, if the discharge was unaffected by other factors?

A There is no point on the stream that you can measure the water, because it is coming out in little seepages here and there for over three or four hundred feet along the sides of the bank, and in the creekbed, and a variance even today of upwards of 20 feet between the highest and lowest points, and years ago it would vary 40 feet on the sides of the hills. How can you get your basis to work your coefficient [illegible] from, when it is a variable quantity below.

Q Isn't the coefficient of resistance what is determined by taking into account all the conditions as they actually exist, and isn't it determined from a certain discharge and a certain head, and must it not necessarily take into consideration the exact conditions that prevail with regard to that?

A I don't know how they can get in all the conditions in

such a case as that; it is not an ordinary case; it is a swam p or cienega condition breaking out on the sides, and it changes the porosity of the strata that it is coming through.

Q If the strata is different through which it comes wouldn't that be taken into account in determing the coefficient of resistenace?

A You don't suppose that there is any place, where you can dig down in that body of land, 40 feet, and have it all the same do you?

Q Wouldn't it average about the same?

A In one place there may be a strata of gravel and clay, of ten feet each, and a quarter of a mile away it might 20 for one and 2 for the other, or some other way; there are no two wells alike in that section that we have any record of, that show the same exact material penetrated at the same depth, and the same thickness, no two wells that we have any record of.

Q The place of measurement does not cut any particular figure with regard to the coefficient of resistance, if the conditions remain the same, does it?

A It certainly does cut a great figure; you take the plat Mr Finkle has made, and you take the average elevation of the discharge at 1325 as he did at 1340, and it don't make a figure at all like he has drawn; ofcourse it makes a difference.

Q The determination of the coefficient takes into account all of those things doesn't it?

A The coefficient is determined by the elevation.

Q Oh no, the coefficient is determined by taking the elevation at one place, and the discharge at another.

A The discharge from a known elevation - you have to take that into consideration.

Q You take a discharge from a known elevation -

A You haven't done that in that case; you have taken one point 1285; you take and figure it from another elevation and it makes a very different shaped picture, although it does not agree with the actual discharge as I have stated.

Q You have undertaken to diagram this and show that the relationship would work out successfully.

A I have?

Q Yes?

A No, sir.

Q What did you do with reference to making diagrams?

A I made three clculations to see if taking different elevations for the discharge, and the head, would fit the actual facts, and it simply doesn't; it shows in the direction of it, and comes a good deal nearer than Mr Finkle, but it doesn't fit the flow, down to nothing at one time, and 87 inches at another.

Q It didn't come near enough to induce you to present it to the Court.

A It comes about half way between Mr Finkle's line and the facts of the case.

Q Referring to Mr Finkle's diagram, you made some corrections in his testimony, but have you found any errors in the figures on the diagram or in the calculation.

A I don't think I have looked at the diagram at all except

when it was on the board; not that I know of; I didn't check overit, because it looked to me very reasonable anyway.

If you take last year and this year this time, both the Y tunnel--running in both years, and the heads about the same, you can hardly see the difference. At times in this diagram of Mr Finkle's, there was no flow from the Y tunnel at all.

Q It came out in the same cross section in which the Y tunnel is situated?

The Court: I don't think your other answer was quite complete in one particular; you said "both the Y tunnel and" - I suppose referring also to something else: what else did you refer to there?

A Both the Y tunnel and the springs and cienegas.

Q It came out of the same cross section in which the Y tunnel is situated?

A It came out the same half mile area, and 60 feet difference in elevation.

Q It is the samegeneral character of soil sand gravel and strata all through there?

A All I know about it is from the digging of the Y tunnel; the character of that tunnel; I can't tell otherwise.

Q Now referring to the calculations made on the lower amounts, and you perceive that where the amounts are not so very distant of discharge, that there is quite a variation in the natural and calculated discharge: have you any criticism on those?

A I don't know that I have; I haven't thought it was worthy of going over and looking at that, because I have no confidence in it,- no confidence that this is a fair way of taking

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such a case as that and working it out; the pumping of the wells is the greatest factor of all; and those measurements are taken sometimes when pumping is going on and sometimes not.

Q As a result of that, necessarily it is your conclusion that from the determination of the elevation of the wells, and the discharge of the Y tunnel and the Springs, you are not able to work out any calculation which shows their relationship?

A No, sir; it is not.

Q Why not?

A Because I think there is no question of it; whenever the water raises in those wells, without any variation there is more water flowing from the Springs; that is the best proof I can think of;.it may not be an exact quantity that you can figure out theoretically; but the fact is that there is more water flowing from the tunnel and springs, every time the elevation raises in the wells.

Q Isn't it a fact that the waterplane generally tends upward whenever there are good seasons preceding?

A Certainly it is.

Q And isn't it a fact that the discharge of tunnels and x springs tend to increase for the same reason?

A It certainly is; when you get a higher plane of water above you will certainly get more discharge below.

Mr Goodcell, Q (Cross Examination) You have given as your opinion that the pumping of the Lone Star well number 6 may have some effect on the water in the Y tunnel, and you gave some figures and measurements which I think ended in June, 1906: Now, take the season of 1906 right through:

was there any pumping during that year of the 16th street well?

A No, sir.

Q As to the Lone Star wel number 6 that was pumped with a considerable degree of regularity during that entire season was it not?

A I believe it was, but I would have to look to see; I find that my diagram of this chart 3 only shows up to June 4th, 1906; it had been pumped the month of May about three quarters of the time; and I don't know just where the other table is; there is another table in evidence, Mr Trask's table, showing the balance of that pumping; I simply know they pumped right along in 1906 for the upper supply of the Cucamonga Water Company.

Q What is the fact as to the elevation of the water in Hellman well number 2, during the entire season of 1906?

A Commencing the 10th of May, immediately prior to that it had been rising steadily.

Q Did it continue to rise during the remainder of 1906?

A Well, I was going to read the figures here: May 10, elevation 1343.5; June 9th, after they had been pumping a month, 1344.4, raising .9 of a foot.

Mr Britt, Q Who had been pumping a month?

A Lone Star 6. The next measurement is Augusy 16th, 1906, two months later, 1344.2, a ~~little~~ fall of .2 of a foot. The next measurement is September 15, 1344.8, a rise of .6 of a foot; October 12, 1344.8, continued the same elevation.

Q During all that time the Lone Star well was pumping?

A Yes, sir. December 7, 1345.7; it showed it kept along about the same elevation; in six months it did not vary a foot and a half, from June to December.

Redirect Examination.

Mr Britt, Q On this subject of slope of the waterplane to the southeast or southwest, have you observed the distance between the Haskell wells and the Richey well, and contrasted it with the distance between the Haskell wells and the Sourwine shaft?

A Yes, sir.

Q What is the distance?

A The distance is a thousand feet less between the Haskell well and the Richey well, than between the Haskell well and the Sourwine shaft; and there is no way of telling the waterplane because there is no water in the Richey well at a depth of 150 feet; but if there was water there, the fall would be about 80 feet more, of the water between the Haskell well and the Richeywell, in a thousand feet less distance.

Q What is the direction?

A The Richey well is nearly due south I think; it is a little bit east of south of the Haskell wells by Exhibit number 1 of the plaintiffs; but I don't make those statements to contend that the water runs from the Haskell well to the Richey well, by any means.

Q What do you think about the probability of the water having a slope from the Haskell wells to the Richey wellx- the bottom of the Richey well, as compared with the slope between the Haskell wells and the Sourwine shaft southwesterly somewhere from the 15th street wells, if the matter of

probability is determined by the circumstance merely of difference of elevation of the water at the Haskell wells and that at the Sourwine shaft and the Richey well, respectively? Do you get the idea?

A I get the idea, but there is more of a slope between the Haskell well and the Richey well, by far, than between the Haskell well and the Sourwine shaft; and also in addition to that it is almost directly down from the Haskell wells, down the channel of the Cucamonga Creek, to a certain extent, down in that direction I mean, between the main red hill and the red hill on the east side; it is shown on this exhibit, plaintiff's 84, to be the steepest slope of any that is shown anywhere, between Lone Star number 6 and Lone Star Number 5, but the water don't seem to go that way.

Q On that exhibit, the elevations in the Hellman well number 2, at the head of the west branch of the Y tunnel are shown?

A Yes, sir. That is given with the others.

Q That well is situated to the south and east of the 16th street wells?

A It is almost exactly southeast of the Haskell wells, and ofcourse it is more east than south from the others.

Q Does the elevation of water in that well, when the wells are unaffected by pumping, from your observation, stand higher or lower than that of the Haskell wells or the other 16th street wells?

A It stands generally about from two feet to two and a half feet lower than the Haskell wells, and from 3 feet upwards lower than the others; without any effect of pumping I mean, when they have been quiet and not pumping for a few weeks

or a month.

Q You were questioned about any elevations of water on Exhibit number 64, southerly from the line of the 16th street wells: I inquire of you whether besides Hellman well number 2, there are any elevations there of the place of emergence of water from the Cucamonga Springs?

A There is that elevation given there, and also the elevation of the mouths of the different tunnels, and the weir number 8, by the Brick Hotel.

Q That brick hotel that you mention,- is that the same as the Mountain View Hotel?

A Yes, sir.

Q It has been called by different names by different witnesses.

A Yes, sir.

Q That is an old building that was used for hotel purposes, near the creek division box, or weir number 8?

A Yes, sir.

Q Have you prepared a table showing comprehensively, the discharge of water from different wells and tunnels, and streams, and springs, and cienegas, commencing in 1880, when measurements began to be systematically kept, or at any rate, occasionally kept, down to the present?.

A Yes, sir.

The Court, Q Does that purport to be from measurements of your own, or from the evidence presented here in court?

A Supposed to be all in evidence; it is a tabulation, as I understood the Court requested to be made here in open court, one day, and contains matters from the evidence here, to get

the figures all into one set, so the Court could look them over, without going to all the different exhibits.

Q This is the tabulation made in response to that suggestion?

A Yes, sir; I gave a copy of this to Mr Trask a week ago today; he has not said anything about it since. I don't mean to say that this contains every individual daily measurement like Exhibit 3.

Q State what it contains.

A I will read what it contains: "Measurements of water in and around Red Hills, at Cucamonga, California, as testified to in Superior Court, case 9167, San Bernardino County, California, compiled from Plaintiffs' Exhibits 3, 11, 37, 69 and 78, and the testimony offered by defendants, principally that of A. W. Trask, April 8, 1909" - and then the headings of what it purports to show: The date, the name of the observer; and then column number 1:

"Waters of Cucamonga Creek, at weir number 8, creek division box." Column 2: "Waters from cienegas and Y tunnel, east side." Column 3: "Total waters from the 526.97 acre tract or Cucamonga Springs." Column 4: "Total waters from cienegas, tunnels and wells, west side, except the water going to Ontario." Column 5: "Total waters to Ontario, from tunnels and wells below the Base Line". Column 6: "Total water from west side Red Hills below Base Line", that is outside of the 4th and 5th, " including number 2 tunnel or Sadie". Column 7: "Total waters to "Ontario, from the 16th street wells, pumped water". Column 8: "All waters of Cucamonga water Company, from wells and Lone Star tunnels, east of the 526.97 acre tract."

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Column 9: "Elevation of water in San Antonio Water Company wells 7 or 8"; it was put 7 or 8; 7 was given all the time when we could get that; when not, 8 is taken; they were close together. Column 10: "Elevations of water, in Hellman well number 2, at end of west branch of Y tunnel." Column 11: "Rainfall, San Bernardino records." The next column is headed "Remarks". And the intention under the remarks is to refer to the books and the pages, or the exhibits, where each and every measurement was made.

Q Books or pages of what?

A Of the testimony; and the numbers of the exhibits, where the evidence came from; that is put down here.

Q What testimony do you refer to?

A The testimony in this case.

Q The reporter's transcript?

A Yes, sir. And this was made,- I don't know whether I wanted to make it or not,- it was made, because as I understood in open court, Judge Oster one day asked to have something compiled, showing things in a more condensed shape; at that time I spoke to Mr Trask about it; he was going on the stand then, and he said "I have lots of measurements, and I have no time; we will see about it later" or something; and I have made it myself and handed a copy to Mr Trask, and I have not heard from him since.

Q How long since?

A A week ago today.

Q Mr F. [illegible]. Trask, one of the witnesses for the defendant San Antonio Water Company, and others, in this case?

A Yes, sir.

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Q Did you tell Mr Trask the purpose for which you had made it?

A I told him it was made at the request of the Court, as I understood the matter, and I wished he would look it over, and see if he wanted to find any fault with it, or make any suggestions or changes in the matter, and he took it and rolled it up and took it away, and that is all I have heard.

Q In making this compilation what has been your plan of selection?

A As to the early measurements I have taken every one of them practically; we took what we had; up to 1899 I think I have taken all; there might have been some skipped, but I have taken practically all of them in that early time, because there was only about one a year, and we were glad to get any we could; Since then I have tried to take even dates as near as I could, once a month, of the later years where we have the frequent measurements, irrespective of whose the measurements were, but simply took the amount of water testified to at that particular date; of course you couldn't give daily measurements and condense it; it averages up about right, and it gixx gives the amounts and the particular date; and I have tried to pick outxx even dates; and I havenot tried to pick out any high or low measurements.

Q And in the column of remarks at the right, your references there have been compared and checked over to see whether they do refer to the proper exhibits where the evidence is found, or the page of the transcript from which you take authority for the figures in your columns?

A I checked them all over and spent a great deal of time on it, and I believe it is right; but as far as swearing that every individual reference is quite accurate, I don't want to. I think it is and I believe it is, and I tried to make it so.

Mr. Britt: We thought that some paper of this sort was almost indispensably necessary for the purposes of the Court a and for convenience of counsel on both sides. At any rate, for our purposes. We don't know how our friends the enemy regard it. I thought something was necessary so that there should be obtained for the purposes of argument a showing of the history of the water manifestations around the Red Hills from time to time, beginning about '85, until the present time. The Court having made the suggestion to which the witness referred, we requested him to make the compilation, and now we offer it in evidence,-- not as primary proof of any matter there stated, but simply as a sort of an index to the evidence in the record of that entry.

Mr. McKinley: May I ask Mr. Wright a few questions? Mr. Wright, you made that without any discussion with defendants' experts or attorneys as to what should appear on that?

A The only discussion I had was with Mr. Trask at about the first two or three days that he was on the stand, about

the time the Court made that suggestion, and he was too busy, and he said he was going to put in a lot of figures, and he thought it would be plain enough.

Q. And you then went on and prepared this yourself?

A. Yes, sir.

Q. Any consultation with any one as to what you should put in?

A. I think not, as to the measurements and dates; but I think I consulted Mr. Britt as to what he wanted the headings of the columns to be. As far as these selections of times or amounts, there was no consultations with anybody.

Q About what proportion of the measurements in the record are in this?

A Well, I would suppose between 10 and 15 per cent, if I was to guess, because exhibit Z alone contains more measurements, probably, than this entire tabulations that we are now offering.

Q Now I notice that under the column "Total water from the 16th Street wells, you take a measurement on March 15, 1899, and repeat it opposite three dates.

A If I have done so I have referred to the book and page just where it is testified to. At least, I intended to.

Q You have referred to some book and page. What was the object in repeating them?

A Because I suppose-- March 15, 1899?

Q Yes; in the seventh column.

A That is where it is 35.6 inches?

Q Well, 13.3 first. That is a measurement of one of the dates which is set opposite.

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A March 15, 1899, is 14.40.

Q What was the object in repeating those?

A Because that is the only measurement that we have in evidence here that I know of of the pumping of that water for that year from the measurement as made, and that is made by Mr. Finkle on that date.

Q Then you repeat a measurement 13.60 three times in that column.

A That was for the previous year.

Q Where did you get that measurement?

A That measurement is theonly uncertain one--

Q You got that out of an answer made by Mr. Trask as to what he testified in the McPherson case?

A That is probably it. I will say right now that those two measurements are theonly ones I felt any doubts about.

Q And in that answer he stated different limits of the water?

A This was dividing the limits, probably; taking the average of what he said.

Q Now there were no elevations of water in wells-- You have only taken the San Antonio Water Company's wells 7 and 8 and Hellman well no. 2.

A That is all simply to save room for the balance. The others are in evidence and even reachable. I don't know that it was necessary to put these in. The others are in good shape in the tables.

Mr. McKinley: We object to the table as not in rebuttal, immaterial, incompetent, and that it is an argument on the part of plaintiffs sought to be introduced, which is a mere

argument on the part of plaintiffs' side, which is a mere repetition of testimony in this case, if correct, and we submit that as far as a table of this sort is concerned it hasn't any relation whatever to the suggestion made by the Court that our engineers get together and prepare a table, which we would be glad to do." * * * * * * * * * *

* *

The Court. The objection will be sustained." * * * * *

Mr. Britt: Mr. Wright, calling your attention to Plaintiffs' Exhibit 78, I observe that there are captions here like this: Cucamonga Water Pumped from Lone Star Well. That appears to be shown as water measured at weir no. 5, and it is Cucamonga water flowing from the 35 acre tract and Lone Star Tunnel. What is meant by the terms "Cucamonga water"?

A I should have said Cucamonga Water Company water.

Q That is what is meant?

A Yes, sir; it should have said it on the tabulation.

Mr. McKinley: We have no objection to your writing it on the exhibit. The exhibit ought to show. Some of us may forget.

Q Questions were put to you about the possibility of a bulkhead in the Y Tunnel and the escape of water which you thought would occur around the bulkhead. I inquire of you whether there is any difference between the descent of water on the surface of the ground when it falls in the form of rain, or any form, so far as that is concerned, and the diffusion of water here through the soil about a bulkhead by reason of a pressure on the water in the latter case.

A The effect would be practically the same. The pressure

of the water from the bulkhead, that is, on the sides of the tunnel, it would tend to press it out through the gravels the same as if it fell on the surface . It would tend to go forward through the gravels; and it would go to the south, as the fall of the land is to the south.

Q If the water is subjected to any pressure under the soil, would there be any difference between the water confined in a tunnel and the water resting merely on the surface of the ground?

A There would be a pressure out from the tunnel; it would force the water out from the tunnel. Probably near the tunnel it would be considerable more than as it got further away from it, but it would press water out, just as the weight of water on the surface presses it down. There would be more weight when it is confined in the tunnel by a bulkhead. There is only a small area in that tunnel where you could confine it. It is only 500 feet long in the Prancher. And at the mouth you couldn't fix it on account of the gravel and boulders.

Q Is there any hydraulic pressure on water which falls on the ground in the form of rain?

A No, sir.

Re-Cross Examination.

Mr McKinley: Q Referring to the Fiche well, the Fiche well is just below the Red Hill, is it not?

A It is below the Red Hill formation, just the same as the Jordan well is.

Q And there is a barrier evident by the surface of the ground and by reason of explorations between that and the

xxriaxx Haskell well, is there not?

A Underneath the surface, undoubtedly.

Q And so far as you know there has never been any outbreak of water or outburst of water below the Red Hill showing any subterranean passage of water, has there?

A No, sir; neither was there over the Sourwine shaft.

Q There is no barrier found there?

A Above there there must be a barrier.

Q But you haven't any barrier, except that the fall of the water plane is so great? That is the only evidence that you have of a barrier?

A That is the evidence. In such a short distance, when it is xlaxixx falling so much here. The water would go down the shortest passage if it was all open.

Q Buton the other side of the dike it is manifested on the surface and by explorations?

A Yes, sir. Q: There has never been any shaft put down that showed any barrier at the Sourwine well?

A Evidently not. Perhaps it is below the barrier.

Q The Sourwine well itself did not show any barrier?

A Not that I have xxxxxxx heard testified to.

Q As far as that dike formation is concerned -- according to exhibit U-- it extends up around to the northeast, as demonstrated by obtaining wells with water in them?

Mr. Britt: I object to the question because there should be an end to this. This is a return to the cross examination.

The Court: Overruled.

A From what is shown by the wells there is probably some stoppage or dike to the east, but it must be below the Old

Settlers' well because at the Old Settlers well the water is nearer to the surface than any other.

Q. Which indicates that it is nearer to the barrier?

A. Yes.

Q. With regard to the measurement of water going to Ontario, that was a measurement of the water actually going after its division to Ontario and Cucamonga?

A. The amount of water flowing over the different weirs.

Q. It was not a measurement determining the amount of water that was taken by the Ontario Company and put on to the 90-acre tract?

A. It was not to determine the amount of water going on to the 90-acre tract except in exhibit Z.

Q. I am referring to the tabulation you gave here yesterday, water to Ontario and Cucamonga?

A. That is simply an actual measurement.

Q. Without regard to who diverted the water?

A. Yes, sir.

Q. You have stated that only during the last four or five years you became of the opinion that the waters and diversions on the west side affected the east side?

A. I don't know that I said four or five; possibly I put it six or seven. I remember very distinctly that I had an opinion to the contrary nine years ago.

Q. At that time of your opinion to the contrary had you noticed that there were developments by which the water to the west side increased between 1895 and 1899 some [illegible] inches, and that the water decreased 166.7 inches on the east side?

A No, sir; nine years ago it hasn't increased any such amount as that.

Q August 25, 1899, wasn't it 203 inches on the West side?

A No, sir; I don't think so. I have got it down here as 160 inches on the west side from measurements made by myself, and that was after the sale of 120 inches to the San Antonio Water Company, and they were getting at that time 92.4 inches.

Q Wasn't there a measurement when they were pumping in which they were getting 202 inches?

A You may have it there; I don't know.

Q Well, leaving that aside, hadn't you noticed at that time that there had been a large increase in the amount of water taken on the west side and a large decrease on the east side?

A There was almost as much water-- only 12 or 15 inches less that year on the west side than on the east side, and that was after the '96 well began to get into operation.

Q But you didn't actually form any opinion from that that one was affecting the other?

A I didn't go into any detail.

Q Didn't you go into it particularly in detail in '99 when the question of the sale from the Fruit Land Company to the San Antonio Water Company was being considered?

A Nothing like we have at this time; and we didn't have as much information as to the effect on the results that we have now.

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S. G. COUSINS.

S. G. COUSINS, being recalled for plaintiffs in rebuttal, testified as follows:

Direct Examination.

Mr. Pritt: Q Did you at some time take some notice of the flow of water in the Cucamonga Creek between the mouth of the canyon and the 19th Street wells or, we will say, the Base Line?

A Yes, sir.

Q Where the Base Line is crossed by the Cucamonga Creek, running down to the Cucamonga Springs?

A Yes, sir.

Q At what time?

A The first day of April, 1906.

Q What did you notice?

A There was no water at Base Line in the Creek coming down through the hills, at the springs.

Q How was the water further up the wash?

A There was a little water crossing Nineteenth street.

Q How was it still farther up toward the canyon?

A The stream grew pretty fast as you went up the creek.

Q Did you go up in the mountain canyon?

A I was up within half or three quarters of a mile of the mouth of the canyon.

Q Were you up into that deep depression which stretches out quite a distance southerly from the mouth of the canyon to the debris fan?

A Yes, sir.

Q How did you find the stream up there?

A A large stream of water.

Q How much?

A A thousand or fifteen hundred inches.

Q Was there any turning out of water-- anybody at work there then turning out the water into the side channels or otherwise endeavoring to ut it into the gravel?

A Nobody that I saw at work there at that time.

Q What time had elapsed since there had been a heavy rainfall?

A March 26 there was a heavy rainfall. On March 19 there was a smaller rainfall. It was April 1st that I was up there.

Q Did you at that time,or any other, observe the nature of xxxt the so-called works by which the San Antonio Water Company spread water from that stream?

A Yes, sir; at that time along the creek I was with Mr. Losch for the purpose of finding where the water was going and the nature of the dam that turned the water on to his land, as he claimed. As to any other work that they might have done spreading ~~it~~ out the water, I didn't see. I didn't look for it.

Q What sort of work did you see?

A At the mouthof this wash where the creek forked there was a dam of rocks at that point-- rock piled up-- and it had the appearance of being freshly placed there, a portion of it, at least, and the water was all flowing at the time I saw it, down in the east channel.

Q The water was all flowing in the east channel?

A Yes, sir.

Q Where was the stream with reference to this dam of rocks?

A The stream was on the east side of this dam of rocks.

Q Did the dam of rock in any way affect the stream?

A It was confining it in that channel.

Q Did it spread it out any?

A No, sir.

Q Describe the dam of rocks.

A It was just a pile of rocks about 20 feet long, I should say, and piled up in the shape of a pyramid.

Q How high?

A I should say four or five feet high. It showed that on the west side and on the east side-- the stream side-- three feet above the toe of the stream.

Q Is that all you saw? Was that all the works you saw?

A. Above that there was in the wider portions of the creek, as the creek would widen out in places, possibly for a distance of a couple of hundred yards above this dam, I saw layers of rocks most of them the size of a cocoanut laid in strings, and some of the strings were five or six feet long. I didn't notice that it was diverting any water particularly.

Q Have you made some measurements from the points of seepage in the Cucamonga Springs or along the creek where the springs rose, up to Base Line recently?

A Yes, sir; I measured from Base Line south,-- south of that point of my second elevation.

Q What did you find?

A And from there I measured up the creek.

Q Can you mark on plaintiff's exhibit 1 here the place

from which you measured northerly to Base Line? Did you measure up or down?

A I measured down.

Q From the Base Line to the seepage?

A Straight south to the large rock which marks the point of my second measurement of the elevation of seepage water.

Q You gave the elevation the other day?

A Yes, sir.

Q That was in the direction of the Haskell wells, was it?

A It was straight south.

Q Straight south from the Haskell wells?

A In the center of the road.

Q What is it called on this map?

A Carnelian Street.

Q State the distance.

A 2394.7.

Q That was from what? The center of Base Line road?

A From Base Line.

Q From the Base Line?

A Where it crosses that road.

Q Crosses what road? Carnelian Street?

A Yes, sir; or its extension southerly.

Q You measured from that ~~xiw~~ point directly south?

A Yes, sir.

The Court: Q The point to which you measured was the lowest line southward of your seepage?

A No, sir; the point of second measurement, about 6 feet above my first measurement of seepage. It is the second point of seepage.

Mr. Britt: Q You measured three elevations which of the places where the seepage first appeared in the creek?

A Yes, sir.

Q And this was the second one of the three?

A Yes, sir.

Q Did you make any other measurements?

A From this point of the second measurement of elevation of seepage water I measured up creek to the point of third measurement, and it was 275.1 feet.

Q That is where you found the uppermost point of seepage at the time of the three observations?

A Yes, sir. Also on April 16, 1909; that is the time I made a measurement from Base Line down. I also measured to where the waterappeared on that date at the highest point, and it was 77.3 feet up creek from thepoint of third measurement of elevation of seepage water.

Q Did you make any measurement of distance between your first two points of elevation of seepage?

A I tried to find it but I couldn't locate it exactly. It was in the neighborhood of 10 feet south of the point of second measurement.

Cross Examination.

Mr. McKinley: Q How often were you up at this period that you speak of examining the flow of water from the Cucamonga Canyon? How many times?

A I was one day up from Base Line.

Q What day was that?

A April 1st.

Q Only one day that you were up--

A From Base Line north.

Q You were not with Mr. Bosh on any other day?

A No, sir.

Q That was April 1st?

A Yes, sir.

Q What day of the week was that? It was Sunday, wasn't it?

A I think so.

Q You didn't find anybody working up there anywhere?

A No, sir.

Q How far up did you go from Base Line?

A 19th Street is seven-eighths of a mile north from 16th Street, and the mouth of this wash was about seven eighths of a mile north from 19th Street, and I was about half way up the wash.

Q What was the first thing you saw there which appeared to be in the way of an effort to divert the water? Was it this dam that you spoke of?

A, Further down the creek there was other dams, but as far as I could see they seemed to be old work.

Q There were dams at otherplaces down below?

A Yes, sir.

Q Was there any dams at places where the water had been running recently, or was it still wet from the run of water?

A I don't understand you.

Q Was the ground wet at any of those dams?

A No, sir.

Q They were away from the channel?

A They were on the sides of the channel.

Q How far from the place where the water was running?

A The first dam that I found was probably one-third of the way from Base Line up to Nineteenth Street.

Q How far was it to the water? Was the water anywhere near that dam?

A No, sir.

Q How far was it about?

A Where I first found the water was just south of Nineteenth Street.

Q Was the dam below there?

A Yes, sir; away below.

Q And you found the water just south of Nineteenth Street. You saw several dams as you went up there in the channel at various places?

A Yes, sir.

Q After you came to the place where you saw water when did you first see the dam.?

A It might have been 300 feet or such a matter southerly from this dam that I describe.

Q How near was that dam to where the water was running?

A The water was running on the east side.

Q Had it run over to the other side at any time near that? That is, did you see signs of water having been near that dam?

A It was only on the east side; I didn't see any signs ~~that the water had been near that dam~~ of its going around it.

Q Was it diverting the water in any respect?

A Yes, sir; it was on the west side of the stream.

Q Was the water touching that dam at all?

A Yes, sir.

Q How much of it?

A It was 700 feet long and as I recollect it was touching the whole of it.

Q What was the next dam that you described?

A The next one I described?

Q The one about 20 feet long. Was water running there?

A Yes, sir.

Q Parallel with the water, or crossways?

A Parallel with it.

Q Did you find some more dams above there?

A No, sir.

Q How far above that did you go?

A Half way up that gash.

Q How far was that above the place where you saw the dam?

A Possibly three-quarters of a mile.

Q You didn't see any more dams?

A Not what you would call dams.

Q What did you see?

A I saw thepiles of rocks that I described. It looked as if the boys were playing up there.

Q How did they run, those piles of rocks?

A As I remember it, it was along the western edge of the stream.

Q Was the flow of the stream being affected by those piles of rock?

A Possibly there was a little water turned out a short distance. Most of it came back again as near as I could see.

Q Could you see where any water had been running in any other channel recently?

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A Yes, sir; it had that appearance.

Q It had the appearance of having run there a little while before?

A Yes, sir.

Q Whereabouts was Fesch's land that you were talking about?

A Section 15, 1 south--

Q Where is that?

A In Cucamonga and south of the Santa Fe railroad.

Q Whereabouts is it with reference to the Base Line?

A South of Base Line.

Q Then the water was not reaching his land or coming near it?

A Not on that date.

Q His land was below the Santa Fe, wasn't it?

A Yes, sir.

Re-Direct Examination.

Mr. Britt: Q What do you call the gash?

A The gorge or box canyon, whatever you might call it. It runs northerly from where the stream forks into separate channels in the mouth of the canyon.

Q The descent of it is southerly?

A Yes, sir.

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W. J. KINCAID.

W. J. KINCAID, recalled for Intervenors in rebuttal, testified as follows:

Direct Examination.

Mr. Haskell: Q Have you observed the storm waters coming down Cucamonga creek during rainy seasons in years past?

A Yes, sir.

Q For how long have you been acquainted with the the waters that have been accustomed to flow there?

A Since--

Q How many years?

A We moved to Cucamonga in '66 and lived there ever since.

Q How far back would your memory run so as to be clear about it?

A Probably back as far as '75 in a general way.

Q From '75 down to the present time how often during the rainy seasons have you seen the storm waters crossing Base Line coming down from Cucamonga Creek?

A I can't just say how often, but the waste water from the canyon doesn't run across Base Line or San Bernardino road very often during the winter season.

Q How often would you say in one winter?

A Well, as often as there are heavy rains they would probably run across the Base Line or San Bernardino road.

Q And when the heavy rain comes how long does the stream continue to flow after the rain across Base Line?

A It quits flowing very quicly in that stream. I should say three or four days.

Q You would consider the last three or four winters what

you would call rainy seasons, wouldn't you?

Mr. McKinley: Objected to as calling for the conclusion of the witness. We have got the rainfall.

Q What was the quantity of water that you have seen passing Base Line during the rainy seasons of the last three or four winters? How would it compare with former years?

A I think last year there was an immense amount of water ran down across that San Bernardino road. I think that would be a favorable comparison.

Q Do you think as much crossed in the last three or four years as formerly or not?

A I think so; yes, sir.

Cross Examination.

Mr. McKinley: Q You reside on this side of the Cucamonga bridge at the Red Hills?

A Yes, sir.

Q On the east side?

A Yes, sir.

Q And your ranches are all on this side?

A Yes, sir.

Q How frequently do you go over there?

A Quite frequently.

Q What for? Where do you go to?

A My business has been such for the last twelve years in particular that I have probably averaged going to Upland and Ontario two or three times a week.

Q During the last year how many ~~xxx~~ times have you seen the storm water crossing?

A I remember very definitely about the middle of February

going across from where the creek crosses down about the Santa Fe track on the line of the wash, that it had washed out the road there so that it was impassable. And three days after that I had occasion to go over it again and the water was still running there quite a good size stream.

Q That was at the Santa Fe track?

A Yes, sir.

Q Are there any other occasions on which you saw it?

A I saw it frequently during all these years, but that time I remember it because I had occasion to go there.

Q Let us get back to this last year: Do you remember any other occasion.?

A I wouldn't want to place any dates further than that one date.

Q You can't locate any other storm?

A I wouldn't like to, because it has been just in a general way that I have observed it.

Q You can't approximately fix any other time at all?

A I saw it a year or so ago.

Q Let's take this last winter. That ought to be fresh in your recollection. When else did you see any water running there?

A I won't place any other time, because that particular time I had occasion to go across it to go down at the Santa Fe track and, as I say, it was about three days apart. And possibly I have a note of the time.

Q Was there much water running there?

A Quite a stream.

Q How big?

A I would have to guess at it.

Q Well, guess. We have had a great deal of that in this case. It won't hurt us to have another.

A Well, I should judge about a thousand inches.

Q You are president of the Cucamonga Water Company?

A Yes, sir.

Q Has any agreement been made between the Cucamonga Water Company and the plaintiffs in this case as to the enforcement of the injunction if one should be obtained against the Cucamonga Water Company?

A No, sir.

Q Any discussion of that?

A No, sir.

Q Any promise on the part of plaintiffs as to what should be done?

A No, sir.

Mr. Britt: There is no immunity oath in this.

Mr. Joliffe: Q Do you remember how it was in '04, which was a very wet year, I believe?

A I remember the year of '04 quite well in one way. That was the first year I started in in the mercantile business in Cucamonga, but I don't remember the rainfall.

Q Did you have any occasion to pass over Cucamonga Creek very often during that year?

A Yes, sir.

Q Isn't it a fact that the water flowed down past where the Santa AFe railroad is now continuously until the first of June of that year?

A I don't think so.

Q Will you say that it didn't?

A Yes; I should say that it didn't, because I am quite positive that the water in Cucamonga Creek wouldn't run continuously during all the winter down to the Santa Fe track.

Q After the first of February till the first of June did it not flow in a continuous stream as far south as the Santa Fe track where it now is?

A I should say no.

Q Do you remember the year '86?

A Not especially.

Q Did you have frequent occasion to cross Cucamonga Creek during that year?

A Yes, sir.

Q Isn't it true that during the spring of '86 continuing until the first of June and later that the water flowed in a continuous stream in Cucamonga Creek past the San Bernardino road?

A I should say not.

Q Do you remember it distinctly.?

A I wouldn't particularly remember any particular year, but I think that I know that the water never for a continuous time ran for thirty days across that San Bernardino road or the Santa Fe track. That would be my judgment.

Q Do you remember the year 1890 being a heavy year of rainfall?

A I wouldn't try to place the years.

Q Haven't there been a number of years since you have lived at Cucamonga that the water has run down the creek in

a continuous stream past the San Bernardino road from the first of March until the first of June?

A I don't think so.

Q Do you remember what channel the stream pursued in the year 1890 with reference to its present channel passing through the Red Hills?

A I wouldn't like to pick out certain years.

Q Don't you remember a time for a number of years when the main channel of the creek flowed to the west of the Red Hill?

A I have seen the water flowing on both sides of the Red Hill.

Q And didn't the main channel of the creek flow on the west side of the Red Hill in 1890?

A I won't say that either. As I said, I have seen it flow on both sides of the Red Hill, and I saw it last year.

Q Didn't it flow mainly on the west side of the Red Hill from the year 1884 intil 1890?

A I won't say that. That water was changing in those creeks and I have seen it in both places; and which would be the main one for any particular year, I won't say. That is, for the last few years I remember it, but back that far I wouldn't want to place any time. Two years ago it ran down and I had occasion to be down to Stoner's place, I should say six miles below Cucamonga, and the water was running there.

Q Several days after a heavy rain too, wasn't it, that you saw it?

A No, sir.

Q How long afterwards?

A I think it was the same day or the day after the big rain. I remember very distinctly being there and seeing the water down as far as Stoner's place.

Q That was probably just water that collected on the surface in the immediate vicinity, and not part of the mountain run-off?

A No, sir; it was water from the Cucamonga Canyon.

Q How did you identify it?

A I drove right by the side of the wash for at least three or four miles.

Q Where did the water go to that ~~xxxxxx xx xxxx~~ fell on the plains in the immediate vicinity of Cucamonga Creek?

A When you get down in that section it is so sandy that it don't run very far, what falls on the plain.

Q It didn't rain very hard down there?

A I don't remember that it was raining at that particular time, but I remember seeing the water, because I crossed it and I discussed it with Mr. Stoner at the time. It was running in his peach orchard.

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MR. HASKELL: Intervenors and Cucamonga Water Company make this stipulation now: That as far as priorities of use are concerned between the Cucamonga Water Company and the Intervenors, that it need not be determined in this case.

MR. GOODCELL: My understanding of the proposition as made by Mr. Haskell and which I agree to, is this. That any decision of this case shall be without prejudice as to the rights of any of Mr. Haskell's clients-- without affecting their rights-- as to any question of priority or right to receive the water through or from the Cucamonga XXXXX XXXXX Springs. But I think perhaps we had better have that stipulation reduced carefully to writing before we submit it finally. I am willing to make the stipulation as Mr. Haskell suggests, but I will suggest instead of doing it now that he formulate it in writing.

The Court: I think that will be the better way.

Mr. Haskell: We will offer a written stipulation.

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W. J. KINCAID.

W. J. KINCAID, recalled by plaintiffs in rebuttal, testified as follows:

Direct Examination.

Mr. Britt: You know and have known the tract of land known as the Cucamonga Vineyard for many years?

A Yes, sir.

Q Are you acquainted with the value of lands of that character in that vicinity?

A I think I am.

Q Take that tract of land known as the Cucamonga Vineyard in the condition that it has been in for the last six or seven years, without a flow of gravity water--or eight years or nine yers, whatever the time has been--What is the fair market value of the vineyard per acre?

Mr. McKinley: Objected to as not in rebuttal.

Mr. Britt: If by mistake it is not rebuttal, we ask leave to put it in as part of the original case.

The Court: You can open your case if you desire to, but I don't attach much importance to it, in any event.

A Well, I should take into consideration the price of wine grapes at the present time, and I would put a price not to exceed $125 an acre.

Q Suppose wine grapes were as high as they have been at any time in the last three years?

Mr. McKinley: Objected to as incompetent, immaterialx.

Mr. Britt: The question is withdrawn.

Q There is a quantity of land on the tract of the Cucamonga Land and Irrigation Company that is not planted to

vineyard?

A Yes, sir.

Q Not planted to anything in the way of trees or vines?

A No, sir.

Q And some of it is used for grain and some for vegetable gardens. What is that land worth without a supply of water for irrigation?

A Without irrigation-- that land is more of a damp land, and I would consider it a little more valuable than the land below, for grain purposes. It produces grain better than the lower tract. It is a little different piece of land. And I should say it would be worth about-- without irrigation-- $75 an acre-- without water, just as dry land.

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Plaintiffs rest.

Intervenors rest.

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W. T. LEAKE.

W. T. Leake, recalled by defendants in their original defense, by permission of the Court, testified as follows:

Direct Examination.

Mr. McKinley: State whether any protest has ever been made to you or to the San Antonio Water Company or any of its officers to your knowledge by any of the plaintiffs or intervenors against the making of the developments and putting down of the wells mentioned in this action as belonging to the San Antonio Water Company?

A No, sir; nothing of that kind.

Q State whether any protest against the making of any of

these developments just enumerated, and particularly xxxxxx as to those belonging to the Ontario Power Company, has ever been made to you or that company since your connection with it by any of the plaintiffs or intervenors?

A No, sir.

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Here the court takes a recess until to-morrow, April 22, 1909, at 10 o'clock a. m.

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J. W. McKinley

IN THE

Superior Court

OF THE

County of San Bernardino

State of California

Cucamonga Vineyard Co. et al

Plaintiff...

vs.

San Antonio Water Co et al

Defendant...

April 23, 1909

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JOS. E. RICH, Official Reporter

Friday, April 23rd, 1908. Fifty-ninth day.

Mr. McKinley: With regard to the Dickerson judgment roll we understand the objection of the other side is that it is irrelevant and immaterial, and it being conceded that there will be no findings on the question, we will not urge it.

Mr. Britt: The objection was also that it was incompetent.

Mr. McKinley: Yes. We will not insist on it.

The Court: In what way is the matter presented here? Is it in the pleadings?

Mr. McKinley: The pleadings allege all of those proceedings as a bar to this action, on the theory that the Cucamonga Water Company has a relationship of trustee to plaintiffs -- not Mr. Britt's plaintiffs, but the Old Settlers and the other intervenor, and that the judgment binds them. I am not insisting on that proposition. We don't care to have a finding on that subject.

The Court: Then the objection will be sustained.

Mr. McKinley: We will offer the judgment roll, and the objection is sustained, as I understand. I will not take an exception, as there will be no findings on that.

Mr. Britt: The objections were formally stated at some length when the judgment roll was offered before. It is not necessary to repeat the objection.

Mr. McKinley: No, and I suppose it is not necessary to take an exception.

The Court: As a matter of fact, I had supposed that that judgment roll was in long ago.

Mr. McKinley: No; it was offered and withdrawn for further consideration. Well, we will take an exception.

Mr. Bonner: I offer now the amendment which I ask leave to file, yesterday.

(No objection being made thereto, said amendment is filed).

Mr. McKinley: We now rest as to the main defense.

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J. B. HENRY.

J. B. Henry, called by defendant, San Antonio Water Company, in rebuttal, being first duly sworn, testified as follows:

Direct Examination.

Mr. McKinley: Q Where do you reside?

A Ontario.

Q What is your business?

A Laborer.

Q Are you working for the San Antonio Water Company now

A Yes, sir.

Q And have for a number of years?

A Yes, sir.

Q Were you up at the Cucamonga Canyon, doing some work for the San Antonio Water Company about the first of April, 1906?

A Yes, sir.

Q What days were you there?

A I was there the 26th day of March, the 27th and the 28th.

Q What work were you doing at that time?

Mr. Britt: Objected to as not in rebuttal.

Mr. McKinley: This is in answer to the testimony of Mr. Welch and Mr. Cousins, as to what they observed there.

The Court: The objection is overruled.

A I was putting in dams across the stream, and spreading the water.

Q State whether there had been a rainstorm just previous to that?

A The night before we had a big storm.

Q What was the condition of the water as to where it was running when you began this work?

A Well, it was all going to the west.

Q What work did you do?

A Started to turn it backeast.

Q How did you do that.

A By making a dam of rocks and brush.

Q State whether it was turned all into one channel, or scattered and separated?

A We separated it as we went along.

Q When you left there, what was its condition as to being all in one channel or separate?

A It was all separate.

Q Into about how many channels had it been separated?

A Well, in the north end, it was about 75 or 80, in different streams, but by the time it got to 19th street we had it in fifteen different places.

Cross Examination.

Mr. Britt: Q When you speak of the north end, when it was in about 75 different channels --

A Yes, sir.

Q What do you call the north end?

A Well, I should judge it was north of 24th street; I would call that the north end of the Cucamonga wash or towards

the north end.

Q Was it up in that box-like depression, that deep gulch just below the mouth of the canyon?

A Yes, sir.

Q At the foot of the mountain?

A Yes, sir, a little south of that.

Q A little south of that.

A At the mouth of the canyon, where that deep gulch is.

Q Where the banks steep and high on both sides?

A Yes,

Q That is what you call the north end?

A Yes, sir.

Q About how far below the foot of the mountain?

A Well, sir, I couldn't say just how far.

Q Do you know that house up there on the east side of the gulch?

A Yes, sir.

Q Who lives in that house?

A Dowling, I think.

Q Was it above or below Dowling's house?

A Yes, sir; a little below Dowling's house.

Q Was that the place where it was running to the west?

A About a little bit south of that.

Q Was it running to the east inside of that deep ravine and that deep canyon?

A No; there was just the one main channel for it to come in, until it comes to 24th., and it busted out about 24th street.

Q It busted out about 24th street?

A Yes, sir.

Q Where is 24th street, with reference to Sontag's house, south or north?

A It is south and west of Sontag's.

Q About how far.

A I should judge may be it was an eighth of a mile or a little more.

Q How far was the stream running to the west there at that place where you say you turned it back to the east?

A It was passing Fourth street, Ontario; that is about q mile south of the Santa Fe.

Q Do you mean that the stream was running clear over to Ontario?

A It runs down the west wash.

Q I asked you where the stream was running the day you say you turned it back.

A It was running down the west wash, but the other end of the stream I don't know how far south it was.

Q Where did that west wash run to? Do you know where the 16th street wells are, the San Antonio Water Company's 16th street wells?

A Yes, sir.

Q Where did that west wash run to with reference to those wells?

A It was west of those wells.

Q How far west?

A Which well are you speaking of? The east ones or the west ones?

A Well, any of them.

A Well, I should judge about a quarter of a mile west of No. 1; that is the west well.

Q About a quarter of a mile west of well No. 1?

A Yes, sir.

Q Did you follow it down to see where it was running to?

A No, sir.

Q Was it all running in that channel?

A It all run in that channel for a ways, and then it spread out.

Q In which direction?

A Part of it went towards the west, down past No. 3 well.

Q Where did the rest go?

A Well, that was the two streams; it was all west of the Red Hill.

Q And you spread it out until there was about fifteen streams at [illegible] street?

A Yes, sir.

Q Was the one which ran about a quarter of a mile west of well No. 1 the stream furthest west?

A Yes, that is the furthest west.

Q You didn't turn that back?

A Yes, sir.

Q You did turn that back?

A I turned part of it back.

Q What became of the rest of it? It still ran on in that place?

A Yes, sir.

Q What day of the month was that?

A The 26th.

Q Of March?

A Of March.

Q 1906?

A Yes, sir.

Q How do you remember the date?

A I have it marked down in my note book.

Q Have you your note book with you in which you marked it?

A No, sir.

Q Why didn't you bring your book?

A Well, I didn't know whether it was necessary to bring it or not.

Q Did you turn the water any more after the 26th in the month of March, 1906 -- after the 27th?

A Yes, sir; the 27th; the 28th I was there.

Q Were you there on the 27th?

A Yes, sir.

Q Were you there again after the 27th.

A Yes, sir.

Q In the month of March?

A Yes, sir.

Q What did you do then?

A We kept spreading it out.

Q And on the 28th?

A I was there the 28th.

Q And on the 29th?

A No, sir.

Q Where was it running on the 27th?

A Well, it was in fifteen different streams on the morning of the 27th.

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SUPERIOR COURT

Q In the same streams that you had turned it out in on the 26th?

A Yes, sir.

Q It is in the same streams that you had put it on the 26th: Why did you go back on the 27th?

A Well, we went along to turn it out more at the north end, to take more water out, and spread it up.

Q Where? At the north end?

A Yes, sir.

Q Where was it on the 27th?

A In those streams.

Q Had they washed out, any of the little dams you put in?

A No, sir.

Q The little dams remained where they were?

A Yes, sir.

Q You didn't see it after the 27th?

A No, sir.

Mr. Haskell: Q I understand you to say that on the 26th of March, 1906, you turned all the water into the channel of the Cucamonga wash: Is that correct?

A No, we didn't turn it all; we took a part out of the west wash and turned it down the east wash.

Q What part did you take?

A We left enough in the west so we could handle it from crossing 16th street.

Q Which stream had the most, the east or the west?

A After we got through, the east wash had the most.

Q Beforeyou turned it, the west stream ran down to the Santa Fe track, did it ?

A It was going south of the Santa Fe.

Q How much more did you turn into the east channel than you had in the west?

A Well sir, I couldn't say how much more, but we had quite a lot more.

Q Twice as much?

A Yes, sir.

Q Three times as much?

A Yes, sir.

Q Four times as much?

A Yes, sir.

Q Five times as much?

A I should judge about five times as much.

Q And after you had turned it, it only went down as far practically as 17th street in the eastern channel? Is that true?

A I don't know how far it went in the east channel.

Q Didn't you follow it down?

A No.

Q Do you know whether it rain or notx after the 26th day of March and before the first day of April?

A I don't remember.

Q You haven't looked at that memorandum book since you put the memorandum in it, have you?

A No, sir.

Q And still you remember that it was the 26th day of March that you turned it, because you put it in there?

A Well, I looked at the book a few nights ago.

Q I understood you to say that you hadn't looked at that

book?

A Well, not till the night before last night.

Q Why didn't you bring the book here?

A Well, I didn't think it was necessary to bring it.

Q Now you say you turned this into the east channel, and that you made fifteen diversions in the east channel: Is that correct?

A No; I said that I took water out and crossing 19th street, I made fifteen different streams crossing 19th.

Q But you didn't make any of these diversions until about the point of 19th street, did you?

A Sir?

(Last question read to the witness).

A I don't understand the question.

Q You did not make any of these diversions in the east channel until about where the east channel crosses 19th street?

A Yes, sir; made them up above; made them all the way from 24th street down.

Q How much did you divert in each place?

A Well, it was just according to the size of the wash we had to turn the water in/

Mr. Waters: Q When you began work that season, what time of the year was it? What month?

A Where?

Q To spread this water?

A In that month I started the 14th day of the month.

Q Where was the water running when you began to work at it, on the 14th day of March?

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OFFICIAL REPORTER
SUPERIOR COURT

A She was on the east wash.

Q The water was running down the east wash?

A Yes, sir.

Q All of it?

A Yes, sir.

Q Then you spread it toward the west did you?

A Well, I couldn't say I took it towards the west; I took it right south, and not straight west.

Q It was running toward the west, and you turned it towards the south, is that it?

A Yes.

Q You made it go further west, crossing the other streets that it was naturally running, didn't you?

A South-west.

Mr. McKinley: Q How many men did you have with you when you were on there on the 25th or 26th, 27th and 28th of March?

A I had nine men on the 26th, eight men and myself.

Q State whether you were running any water into the shaft up there at that time?

A On the 26th?

Q Yes.

A Yes.

Q What kind of a stream, large or small?

A I should judge it was about 200 inches.

Mr. Haskell: Q When you turned this water west into the west channel, do you know whether it ran down further inthe west channel than it was running in the east when you turned it? Did you follow the east channel down before you

turned it, to see how far it went?

A We never followed it further than 19th on the west wash, and we just had a little there.

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F. L. TRASK.

F. L. Trask, previously sworn, recalled for defendant, San Antonio Water Company, in rebuttal, testified as follows:

Direct Examination.

Mr. McKinley: Q I believe you discovered an error in your testimony with regard to the water in the San Antonio Creek, some time: Will you state what it is and correct it. It is on page 2550.

A This error is one resulting as follows: On July 10th 1906 I measured the San Antonio Canyon water at two points; I measured the water running through the power house at the weir and also waters in the channel of the creek, above the point where the creek is forded, just east of the power house; and in making up the table I omitted to add the two together; I simply took the measurement at the power house, omitting to include the water measured in the creek itself. On that day the creek water was 1024.5 inches; water going over the weir of the power house was 709; making a total of 1733.5 inches, of which 312 inches was going to Pomona, and the balance, 1421.5 inches was going to Ontario. So that on page 2550, line 8, under date of July 10th, 1906, instead of "430.9 inches" it should read "1421.5 inches."

Q State whether during all of that season the water continued to run in the creek or was diverted?

A The water in 1906 was all diverted from the creek the

latter part of July.

Q After that diversion, did it continue to be diverted all the season or not?

A Yes, sir, until the end of the irrigation season.

Q A profile has been introduced here by Mr. Wright, marked "Defendants' Exhibit Z 24" of the Cucamonga Water Company, and the opinion deduced therefrom that all of the diversions shown upon that profile other than the flow of the Y tunnel and the Cucamonga Springs, affected the gravity flow from the Y tunnel and the Cucamonga Springs: What is your opinion as to that, based upon the profile itself?

A Well, my opinion is, that the diversions of water included in the other diversion, that is the gravity flow from the Lady tunnel and the pumped water from 16th street, have no effect.

Q What is your reason for that opinion?

A My reason is, that the facts on the chart indicate that to be the case. The influence upon the springs and the Y tunnel seems to have been, in so far as it is traceable from the profile, due to the pumping of water in the Lone Star well No. 6. The pumping of that well began in the early part of May, and the discharge from the Cucamonga Springs declined considerable, while the pumping of the 16th street wells did not begin until the middle of June; the decline continued, and notwithstanding the fact that the pumping of the 16th street wells after about the middle or the early part of July was very large, and notwithstanding also the fact that the discharge f rom the Lady tunnel by opening the bulkhead gates, beginning about the middle of June, the dis-

charge was quite largely increased,- still, there was no large or pronounced decrease in the discharge of either the Springs or the Y tunnel, which would show any influence or effect as resulting from these large drafts of water by the Lady tunnel and by the 16th street pumping.

Q A plat has been introduced here, marked Plaintiffs' Exhibit 60. Basing your opinion upon that plat alone, what is your opinion as to the location of the out-let of the waters from what you have described as the gravel basin?

A In general terms, taking into consideration the facts of the record in this case --

Q That would not be rebuttal. Base it on the map there.

A I was going to say, the facts shown on this map, the deduction is that the water of the gravel basins north of the Red Hill has its out-let, over-flow discharge, northwesterly, west of Section [illegible] and west of base line.

Q What do you base your opinion upon?

A I based it upon the water elevations of different dates, as written on this chart.

Q What is your opinion as to whether the rapidity of the drop shown there to the water plane at the Courwine well, indicates that there must be a barrier between the Courwine well and the 16th street wells?

Mr. Haskell: Objected to as not in rebuttal. That was gone into by the defendants in their testimony.

The Court: I understand the question is addressed to this exhibit.

Mr. McKinley: This question does not apply to the exhibit, but applies to the statement of Mr. Wright that the rapidity

of the drop there, as shown by the Sourwine well, was such as indicated, there must be a barrier, because the waters of the 16th street wells remained in quantity which could be pumped, and is addressed to that statement.

The Court: The objection is overruled.

Mr. Haskell: Exception.

A In my judgment, the rapidity indicates both conditions: indicates that low down the Red Hill barrier extends to the west, but that the boring known as the Sourwine shaft demonstrates that that barrier is at least 100 feet below the surface at that point; that it is loose open material, and affords light resistance to the movement of water, and that is proven by the fact that the water is so much lower at that point; if there was large resistance and a barrier there, the water would come to the surface at that point.

Q What is your opinion as to the view expressed by the other experts, that the water would not exist in quantities at the 16th street wells if there was such a rapid drop there?

A My opinion is that the water at the 16th street wells is influenced by other conditions which accumulate and pile it up at that point, and that it rapidly decreases and disappears as you go further south from the 16th street wells.

Q What is your opinion as to the existence of separate planes of saturation as between the far east wells, consisting of the Sunset, Hermosa, Old Settlers', and Cucamonga Water Company wells, other than No. 6?

Mr. Waters: We object to this question, and this line of questions, on the ground that it is not rebuttal or sur-

rebuttal, but it is a part of the burden which the defendants took up in their main case and went all over it exhaustively as far as both testimony as to facts, as well as testimony as to conclusions and expert opinions, could cover it; that this is a mere reiteration of that which has occupied this court for thirty days, and there is nothing new in it, and we have hashed it, and rehashed it, and put it into the testimony, first as testimony, and then put it in as tabulations from the testimony, and then as computations upon the tabulations, and then they have put in synopses of computations, and it has been stewed and boiled and fried and baked and roasted and simmered until I think everybody in Southern California is absolutely tired of the subject, and we object; it has to stop somewhere some time; that it can't go on like a brook forever; that it must stop; that it must stop with either one side or the other of us; your Honor has stopped us where we have to your Honor's notion, been rehashing, and I think it is but fit that we should reciprocate the compliment which the other side has paid us by reminding them that this matter was completely covered and gone into in their case in chief.

Mr. McKinley: Mr. Wright testified in rebuttal that there was a separate plane of saturation there, and we desire to rebut that as affirmative testimony on the part of plaintiff on that subject, in rebuttal, and we desire to meet it, and I think we are entirely within the rule.

Mr. [illegible]: I would like to add to the main objection this: The question assumes the introduction of a subject by the plaintiffs in rebuttal, which I think is a mistake on the

part of counsel putting the question; there was not any evidence concerning separate planes of saturation; Mr. Wright's testimony was that those wells farther east, Sunset wells and others, were eastward, perhaps southeastward, of a material, which he called the barrier, through which the water moved with less freedom. He did not say there was any absolute separation of the plane of saturation.

Mr McKinley: He said that was separated by a ridge and so on, and he produced a map, and explained it on that map.

Mr. He didn't say the planes of saturation were seperate?

The Court: The objection is overruled.

Mr. Britt: Exception.

A I don't think there is any separation of the planes.

Q State whether in your opinion their standing at a lower level is an indication of that?

A No, it is not.

Q Why not?

A Because the change of those water levels at the lower elevations is caused by local interference; the construction of the Lone Star tunnel No. 2 has developed a prism in there at the expense of springs and waters to the west, and changed conditions exist, which are artificial.

Q There was a criticism of one of your measurements in the tunnel on the ground that it was shown that Bellman well No.2 was not flowing by the elevation; have you anything to say with reference to that measurement?

A If the Bellman well was not flowing over the top of the casing at that time, -- I have no level on the top of the casing, the level was the top of the water, whatever it was in

and if the Hellman well was not flowing at that time over the top of the casing, it was either flowing outside of the casing, or else the water was coming in from the cienega at some other points between where my measurement was made and the division-box. It will be remembered, that the measurements in the record show that whenever the Y tunnel flowed any water, that the cienega outside supplied more or less water to the pipe line which connected the Y tunnel water to the measuring-box where the measurements were made.

Q What is your opinion as to the effect of the bulkhead in the Lacy tunnel raising the water plane at the 16th street wells?

Mr. Waters: Objected to as not in rebuttal.

The Court: Objection sustained.

Mr. McKinley: Exception.

Q Mr. Wright has testified particularly as to theincrease in the Lacy tunnel during the year 1906, as being the r sult of a cessation of pumping during that year: What have you to say in regard to that?

Mr. Britt: The same objection as to the last preceding question.

The Court: The objection is sustained.

Mr. McKinley: Exception.

Q Mr. Trask, have you in mind the condition existing in other tunnels during the year 1906?

A I have.

Q State what the condition was as to these other tunnels.

Mr. Britt: Objected to as being a matter which has been gone into fully by the defendants in presenting their

case in chief, and it is not proper in rebuttal.

The Court: Objection sustained.

Q A tabulation has been introduced here at page 5206 as to the average out-put of the Lacy tunnel: What have you to say as to that tabulation as indicating any sympathy between the Lacy tunnel and the 16th street wells?

Mr. Waters: Objected to on the ground that it is not rebuttal, or surrebuttal; upon the further ground that the mere directing of a question to some new tabulation presented by a witness, if the subject matter is old and a part of the plaintiffs' original case, does not make it rebuttal; it is the subject matter which controls. Otherwise, by producing a new tabulation now by this witness, we would have the right to introduce evidence in rebuttal of that; and if our witness produced another tabulation, that would be equally new, and they in rebuttal might produce another one.

The Court: You are borrowing trouble on that score, Mr. Waters. There will be no more tabulations.

Mr. Waters: The mere fact that we introduced a tabulation, however, does not make this rebuttal; it is the subject matter which controls in determining whether a thing is rebuttal or not rebuttal.

The Court: I am inclined to agree with you there; but here is a tabulation which Mr. Wright produced, upon which he bases certain theories, and I think that it is surrebuttal to ask this witness, taking that tabulation as the basis, as to whether he agrees with Mr. Wright's conclusion on that tabulation, and that only; and that is what I understand to be the purport of the question.

Mr. McKinley: I am confining it to an explanation of this tabulation.

A I say that it indicates no sympathy whatever.

Q State whether you hagve any correction as to this tabulation.

A This tabulation is in error, in that it does not shew correctly the amounts of water that should go to Ontario or to Cucamonga, respectively, during the different months and the different years which the tabulation covers; the weirs at the mouth of the tunnel did not measure the amounts of water due the Ontario Company.

Mr. Britt: I ask that the answer be stricken out.

Mr. McKinley: Yes, that may be stricken out; that was all covered by Mr. Wright's crossexamination, the portion ~~The court: xxThe~~ with regard to the seperate weirs.

Mr. Britt: We ask that the previous part of the answer also be stricken out.

Mr. McKinley: We will consent that that whole answer may go out.

The Court: Stricken out.

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Q What have you to say as to this tabulation, based on the tabulation itself?

A The tabulation omits to show that in 1904 new wells were cut in the [illegible] tunnel increasing the average volume of discharge of the tunnel for that year, which was in excess of the average amount discharged for the year 1905. And it further omits the rainfall conditions which would show the reason for the increased amount ~~ax~~ for the year 1906 as over the preceding year, all of which are elements in determining the discharge of that tunnel.

Mr. Waters: I submit that that is not in rebuttal. The witness has stated all about that increased rainfall in his testimony before, at least ten times.

Q Mr. Trask, referring to the tabulation on page 5227 to [illegible], what have you to say as to that tabulation based on the tabulation itself?

A I think that is a tabulation that I let Mr. Fingle ~~analy~~ analysed. I think I passed over it. I didn't have the time.

Q Mr. Trask, were you up to the point where the flood waters were being spread, near the first of April, 1906?

A Yes, sir.

Q When were you there?

Mr. Waters: Objected to as not in rebuttal; as having been gone into fully by this witness upon the stand in the case in chief of the defendant.

Mr. [illegible]: It all depends on the date. If it is far from the first of April it is not in rebuttal; if it is near the first of April, it is rebuttal.

The Court: It is merely preliminary.

A I was in the canon on April 3rd, 1906 and I was there some days in March.

Q Give us the last date in March.

A I was up in the canyon in March 19, 1906.

Q Is that the last date?

A And I was along 16th and 19th streets on March 27, 1906, and on April 3rd, 1906 I was up in the canyon.

Q What conditions did you find there with reference to the diversion of water when you were there on the 3rd of April, 1906?

Mr. Waters: I don't object. I withdraw the objection.

A On April 3rd, 1906, I measured the Cucamonga creek water with my current meter, and the record is in the case here.

Q Is that record of April 3rd in this case?

A Yes, sir.

Q Then you needn't state anything that is in the record.

A And upon that date I drove over 19th street and 16th street and examined the work of diversion up the canyon at the point where the water was being spread, and I made this note as to the condition of water on 19th street: Not to exceed 15 inches of this flood is passing 19th street. That is a note I made after driving along 19th street after examining the diversion of water.

Mr. Waters: Q What date was that?

A April 3rd, 1906.

Mr. McKinley: Q What was the other date?

A I made the measurement of the creek on March 19th and also made a note of conditions.

Q You needn't go into March 19th. That is too far off.

A And on March 27th I drove over 19th street and 18th street and there was no water wasting below. In other words, the water was being spread out at points above.

Q State whether in your opinion the influence of pumping well No. 6 on the discharge of the Cucamonga Springs and Y tunnel is proportionate to the amount of water pumped from that well.

Mr. Britt: Objected to as not in rebuttal.

The Court: The objection is sustained.

Mr. McKinley. Exception.

Cross Examination.

Mr. Britt: Q About that measurement on July 10th, 1906, 1421.5 inches of water from the San Antonio Creek, is that what remains after deducting the Pomona half of the stream.

A No, sir. It is what remained after deducting 312 inches as the maximum amount of water at Pomona at that time from that supply.

Q The Pomona side does not get one-half of the stream when it exceeds that amount?

A I haven't the exact amount, but about 750 inches --whenever it gets below 750 inches Pomona gets one-half after deducting the 10 per cent salvage, taking out the Bird water. I forget the amount.

Q When you state that the tabulation at page 5226 omits to show that in 1904 new wells were cut, you don't mean I suppose, that the tabulation fails to show the quantity of water which flowed, but merely that it failed to make note of the fact that new wells were cut that year?

A Yes. It fails to make note of the fact that the large

volume of water that year was due to the additional supply obtained from those wells, which made the average that season larger than for the season following, and it likewise does not take into account --

Q I am not asking you about that. Your criticism goes to the extent of denying that the tabulation shows the water which actually flowed from that well. You don't go that far?

A No, I don't deny those amounts, only simply that the tabulation was used for a comparison, and in order to make that comparison it is necessary to take into account the fact which I pointed out.

Q Mr. Wright stated the circumstances in his testimony, did he not, about the cutting of the new well?

A Yes, sir! But not at the time he was arguing the conclusion which he drew from this tabulation.

Q At what point was it that you noticed on April 3rd, 1906, that not to exceed 10 inches was passing 19th street? ~~Xxx~~ I mean at what point was the 15 inches passing 19th street?

A I couldn't say what one of the numerous channels intersecting 19th street I saw that in; it may have been in one or two of them. My practice was to keep a memorandum of the amount of water I crossed in my drive over the street, and put in my notes a total without explaining where I got it.

Mr. Waters: Q You used some little book with reference to your testimony there as to the flood water or surface water. What book is that?

A What book is what?

Q The book that you used?

A One of my note-books.

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Q Will you produce it?

A This is a copy of my original notes. It is not the original notes.

Q When was this copy made?

A It is a copy that I have been making for many years.

Q I am asking you when this copy was made?

A The copy that I read from?

Q Yes.

A I presume some time during the year in which the measurements were made. This book is one that I have kept for my own personal convenience, into which I assemble the greater part of the important measurements that I make in different places for my own reference.

Q Rather a digest of your ~~orig~~ original notes?

A Yes, sir. I calculate to keep it up each year, but sometimes I get busy and don't bring it down to date at regular times.

Q And do you remember just when you brought this one down to date?

A No, I couldn't tell you when, because I do it when I have nothing else to do. Some years different from others. It depends on the press of business.

Q Can you say that you made this copy when the matter was fresh in your memory, so that you could make it without having some other paper from which to make it, or book out of which you copied it?

A I can't answer that question because I don't recollect when I made it, but I made it from my original notes and with a full knowledge of the facts and the ability to inter-

pret my original notes, and this represents the correct conditions as I met them.

Q But that is not really an answer to my question, however satisfactory it may be to you.

A I can't tell you because I have no recollection when I made it.

Q Now, let us see, Mr. Trask. Are you prepared to say that irrespective of the fact of having made this copy yourself, that you have a memory on the subject?

A Which flood waters do you refer to?

Q The only one which you testified to on this occasion.

A Oh, I will give you the original notes on that. I misunderstood you. I thought you were referring to the San Antonio Canyon measurements.

Q No, I am talking about this flood water.

A I will give you the exact data made on the particular date in the book used in the field for your perusal.

Q Show me the note?

A Page 66 of this note-book, under date April 6, 1906, is a measurement of the water in the Cucamonga Canyon as I have stated. It was a meter measurement, and all the elements tabulated here made in the field, and a note in the margin on the book on the same date when I crossed 19th street, and the book was handled with dirty fingers so long that it is difficult to read.

Q Will you be kind enough to tell us the aggregate water then measured as flowing from Cucamonga Canyon without spe spreading?

Mr. McKinley: Objected to.

The witness has not testified to anything about that, and it is not cross examination.

The Court: Sustained.

Q There was flowing at the same point testified to the quantity of how many inches?

Mr. McKinley: Objected to as not cross examination. I told him not to put the measurements in.

Mr. Waters: He testified about the 25 inches.

Mr. McKinley: Oh, the lower flow.

A I will correct you. It was 15 inches. The exact words of the note are as follows: "Not to exceed 15 inches of this flood is passing 19th street."

Q Now then, read into the reporter's notes all the memoranda relative to the estimates made that day by you at that point or other points upon Cucamonga wash as to the amount of water flowing, or where flowing, of the flood water.

A You have it all. You have all the memoranda I have. I put that in my book after passing across 19th street.

Q Do you mean to say that on that date that that was all of the water there was that was traversing 19th street in the Cucamonga flood plane?

A I do say that on that particular date that was all the water that was crossin 19th street on the surface, and that the balance of the measurement which I made on that date -- the difference between the figure which I have given and the amount of the measurements as shown by the records in the case, -- that the waters representing that difference were being diverted and spread out upon the wash at points varying all the way from up near the Montag place down to 19th

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street, and that the waters were going into the gravels and were under daily control of the San Antonio Water Company's employees to such an extent that only 10 inches were passing 19th street.

Q You stated in your direct examination this morning that you were there in the previous month of March, beginning I think on the 17th.

Mr McKinley: He didn't testify as to the 17th. I told him not to testify as to that.

Mr. Waters: I know that, but I am going to find out. I have a little curiosity.

Mr. McKinley: I object to it if you do.

The Court: The objection is overruled.

A I was there in March, but I said it was on the 19th.

Q You said also that you were there at some subsequent date in March. Give each date in March that you were there after the 19th.

A I find I was there on March 27th.

Q Were you there at any other date in March?

A Yes, I was there on March 7th.

Q You stated those dates on direct examination awhile ago to Judge McKinley.

A I stated that I was there on March 19th and March 27th.

Q You were there on this same business on all those dates?

A No, I was there on other business on all these dates.

Q Were you not there on this same business, as well as other business?

A Yes, I attended to it.

Q Didn't you make observations as to this particular subject

matter on each of those dates?

A I have some memoranda made on March 19th.

Q Answer my question. Didn't you make observations on the subject-matter of flood water?

A Not on the 27th.

Q Did you on the 19th?

A I did.

Q Please state it, and please read all your notes right into the record.

A (Reading) March 19, 06. Visited Cucamonga wash to see conditions attending the diversion of flood waters. Mr. Locke with me. On 19th street, about 100 inches crossing on west side, and about 100 inches on east side in two channels, but nothing passing 16th street. In canyon just south of Sontag place, measured the total creek flow. Found 1306 inches." The amount has been given in the record, but the notes have not been given.

Q Now then, on the 27th were you there?

A I was out to the Red Hill but not up in the canyon.

Q Didn't make any observation of conditions at that time?

A No, sir.

Q Then on the third day of April there was water, fifteen inches of surface water crossing 19th street, in which channel, easterly or westerly?

A I don't recollect. I failed to make any note on that, and the amount was so small that I didn't put that detail in.

Q Then there was only water crossing 19th street in one channel?

A I won't say that. I recollect that either on that side

or some other I would find an inch or two inches drizzling across the street in several different washes, and in each case I would make an estimate of the combined amount.

Q. Then with Mr. Henry -- You remember that witness being on the stand?

A. Yes, sir.

Q. Do you know whether he was ordered to turn that water to the west or not, that he said that he did turn to the west?

Mr. McKinley: Objected to on the ground that it was not cross examination.

Mr. Waters: The employees said he did it, and if he did it it accounts for the conditions that existed.

The Court: The objection is sustained. Plaintiffs except.

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F. C. FINKLE.

F. C. Finkle, being recalled by defendants in rebuttal and for the purpose of correcting his testimony, testified as follows:

Direct Examination.

Mr. McKinley: Q. Finish your corrections first, Mr. Finkle.

A. Page 4157, line 12, insert the word "be" after the word "must".

Page 4212, line 12, change the word "barries" to "barrier".

Mr. Pritt: I want to repeat the objection that I made here before in regard to the corrections by this witness. It is an unnecessary consumption of time and will probably take a half an hour or an hour to make corrections like this. The word is "barries" and the context shows it is a mere typographical error. What is the use of consuming time.

Page 4216, line 8, strike out the letter "a" at the end of the line.

Page 4224, line 26 and 27, change the word "tunnel" to "channel."

Page 4246, line 21, after the word "than" insert the words "in same way as".

Page 4267, line 14, after the word "is" insert the word "it".

Page 4274, line 16, change the word "which" to "while".

Page 4276, line 13, afteter the word "only" insert the word "be".

Page 4282, line 27, change the figures "1903" to "1893," and the figures "1904" to "1894".

Page 43[illegible], line 13, change the figures "1.6" in the beginning of that line, to the figures "[illegible]".

Page 4314, line 10, strike out the words "of the".

Page 4324, line 16, strike out the word "that" after the word "may".

Page 4325, I wish to ask if the question is not designed to mean "has the water pumped anything to do with the decline of the elevation of the water plane".

Mr. [illegible]: If it does, I fancy that the context shows it.

Page 43[illegible], line 13, change the word "it" to "is".

On line 22, strike out the last word "of".

Page 43[illegible], line 1, strike out words "the material".

On page 43[illegible], line 16, the figures "[illegible]" should read "[illegible]".

Page 43[illegible], line 2, change the word "of" to "to", so as to read "depth to water."

Page 43[illegible], line 11, put an apostrophe in front of the figure [illegible].

Page 43[illegible], I wish to inquire if that "8" should not refer to "7". That is well 7 instead of well 8.

Mr. [illegible]: I have no doubt it should.

Page 43[illegible], line 11, change the third word "the" to "a".

Page 4386, line 21, change the word "dropped" to "changed".

Page 43[illegible], line 22, change the word "of" to "or".

Page 43[illegible], in lines 11 and 12, Mr. [illegible] question uses the word "lower" twice. I suppose the context shows that one of the words should read "upper".

Page 4397, line 20, change the word "upper" to "lower".

Page 43[illegible], line 4, change the word "by" to "be".

Page 4410, line 20, after the word "is" insert the word "proportional".

Page 4418, line 23, between the words "out" and "reached" insert the word "has".

Page 4440, line 6, change the word "folds" to "flow"

Page 4460, line 22, between the words "by" and "pressure" insert the word "lateral".

Page 4485, line 20, insert the word "of" and the word "accelerated" immediately preceding the word "gravity" should be "acceleration".

Page 4496, line 22, strike out the word "it" before "has".

Page 4501, line 3, change the word "with" to "about".

On line 16, change the word "of" to "under".

Line 17, between the words "had and "been" insert the word "not".

Line 21, the word "portion" should be"period", and after the word "cited" insert the word "from".

Line 25, strike out the words "by some authors"."

Page 4504, line 8, between the words "lines" and "which" insert the word "along".

Page 4505, line 10, change the word "had" to "have".

Page 4506, line 3, change the word "of" after "point" to "from", and in line 6, change the word "a" before the word "water-bearing" to "the".

Page 4507, line 24, change the word "which" to "this".

Page 4510, line 1, change "horizontal" to "sectional".

Page 4515, line 2, change"from" to "on".

Mr. Britt: I object to that change. It does not change the sense a particle, and it is like most of these other cor-

rections which are entirely trivial and do not in any way affect the meaning.

The Court: It does not seem to make any difference in meaning.

Page 4516, line 1, after the word "drawing" insert the word "from".

Line 2, change "of" to "on".

Page 4522, line 22, after the word "in" insert the word "the".

Page 4524, line 16, after the words "exhibit O" strike out the word "in" and insert the words "and by".

Page 4528, line 23, change the first word "homogeneous" to "heterogeneous". I suppose that was my own mistake in giving the answer.

Here the court takes a recess until two o'clock p. m..

AFTERNOON SESSION.

Page 4534, line 9, after the word "crosses" insert the words "the dike".

Page 4535, line 23, change the expression "1902 - 1902" to "1902 - 1903".

And in line 24, change the word "that" to "the".

Page 4544, line 5, after the word "depression" insert the word "as", and change the word "the" before "[illegible]" to "a".

Page 4548, line15, change the word "if" to "is".

Page 4550, line 9, between the words "in" and "supply" insert the words "point of".

Page 4551, line 20, add the words "only to that extent".

Page 4552, line 1, between the words "in" and "from" in-

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sert the word "equally".

Mr. Britt: This last amendment on page 4501, line 20, is a material qualification of the matter which precedes, and we question the right of the witness in this informal way to change his testimony previously given.

The Court: I don't know that this is a matter the court has any control over. I suppose it is in effect a stipulation between counsel that expert witnesses can go on the stand to amend their testimony. I don't mean by that necessarily to change it the effect of it. The court can't tell except from the official report what the witness testifies to.

Mr. Britt: I haven't any disposition to be captious at all, but if it is understood that this is virtually new testimony, the witness testifying anew, then I have no objection.

Mr. McKinley: That is all right. If anything that seems to change the sense that appears from the context set to be justified, you can assume it to be new. He says I intended to say what I meant --

Mr. Britt: He says he desires to add to his language to express his meaning.

Mr. McKinley: Q If you did not testify the way you now wish to be understood as having testified, you meant to so testify?

A Yes, sir.

Mr. Britt: Isn't it a fact that on a revision of the testimony you wanted to testify differently?

A No, sir, I don't want to testify any different from what I am testifying. Very frequently there are omissions of words which change the meaning, and I am asking to get my

correct meaning into the record.

Mr. Britt: I think a witness ought to have the right before the case is submitted to make corrections that are necessary to make the testimony as given coherent --

The Court: In so far as it is a change of testimony, it is as if he asked for leave to correct his testimony. Leave would be granted, and you could cross-examine him on it.

A Page 4555, line 12, between the words "have" and "effect" strike out the words "and its" and insert the word "that".

Line 20, between the words "have" and "entirely" insert the word "in".

Page 4557, line 16, after the word "Wilkinshaw" insert the word "same".

Page 4558, on line 2, change the word "plane" to "vein", and strike out the third line and insert the words "extends under pressure between those points."

Page 4560, line 2, at the end of the line insert the word "is".

Line 5, at the end of the line strike out the words "would have".

Line 6, strike out the words "if it was" and insert the word "were".

Line 9, after the word "overflow" and before the dash, insert the word "and".

Page 4561, line 15, change the word "if" to "is".

Page 4566, line 7, after the word "saturation" insert the word "in".

Page 4562, line 7, strike out the word "they" and insert "it".

Page 4560, line 25, change the figure "5" to "7".

Page 4569, is one of the corrections to which Mr. Wright referred in his testimony. In line 6 on that page, insert the figures "1905" after the figure "5", and in line 10 insert in place of the figures xxx71 "49.71" the figures "39.26"

Mr. Britt: We object, inasmuch as the effect of making the change in the record would render the testimony of Mr. Wright unintelligible.

Mr. McKinley: The corrections show on the face of the record.

Mr. Britt: The xxxxxx changes become the original record.

The Court: I think the better way wouldbe to reserve such matters as amount to material changes and let the witness make them as amendments to his testimony.

Mr. McKinley: Let him do that right now.

Q State whether you made a mistake in your testimony with regard to the measurement of the discharge of the Cucamonga Springs on March 30, 1905?

A I did.

Q What was the error?

A The error was to give the figures "49.71" in place of the figures 39.26" and in referring to the page of the transcript I referred to page [illegible], which is all right, but I should also have referred to plaintiffs' exhibit 75 for the measurement of the T tunnel on that day. I omitted both the T tunnel and the reference to it. On the same page at line 11, after March 16, the year is wrong as given, but it should be 1905. On the same page I made a mistake in the beginning of the answer on line 26, by saying "no". That

should have been "yes." The balance of the answer would probably show that to be a fact any way.

Page 4570, line 1, the figure after "October" should be "9" instead of "19", andin line 2, the figures "2.5" should be "2.0".

Page 4574, ~~line~~ line 26, before the word "flowing" insert the words "for the well".

Page 4584, line 14, change the word "upper" to "synclinal".

Page 4589, line 17, change the word "do" to "would".

Page 4596, line 22, change the word "discarded" to "distorted".

Page 4605, line 27, I wish to ask Mr. Goodcell if he did not refer to the Haskell wells. What precedes and follows in the transcript would indicate that.

Mr. Goodcell: I intended to refer to the Haskell well there and I would like to have that changed.

Page 4620, line 5, change "short" to "shallow".

On line 21 is another figure which Mr. Wright criticized.

Q Mr. Finkle, will you state whether in your testimony that you have given on page 4620, line 21, of the record, you made an error in the statement of the discharge of the Cucamonga Springs and the T tunnel.

A I did so. I omitted the T tunnel measurement, and what I should have said was that the discharge of the Cucamonga Springs and T tunnel was 74.2 inches as shown on page 2003 of the transcript, and plaintiffs' exhibit No. 75.

Page 4622, line 3, the figures before "inches" should be "[illegible]".

Page 4631, line 15, the date "September 17 1907" should be

September 19, 1907".

Page 4632, line 7, change the first word "to" to "of".

Page 4636, line 1[illegible], between the words "fall" and"till" insert the word "regularly".

Page 4638, line [illegible]4, change the figures "55,5" to "53.03"

Page 4640, line 19, change "13.40" to "1340".

Page 4643, line [illegible], change "to" to "by".

Page 4644, line [illegible], change "of" after the "A'" to "on".

Page 4656, line 12, change "of" to "for" and "the" to "a".

Mr. Pritt: Objected to as wholly immaterial. We had hoped to get through with the evidence this afternoon, but I am afraid at this rate of making immaterial corrections the day will be consumed before we get through with them.

Page 4665, line 17, change the word "water" to "width".

Page 4666, line 15, the word "horizontal" should be "vertical" and the same on line 16.

Page 4691, line 11, change the word "long" to "wide".

On line 20, "pliocene" should be "pleistocene".

Page 4697, line 11, change "waters" to "materials".

4702, line 26, between the words "on" and "angle" insert the word "an".

On line 27, between the words "an" and "angle" insert the word "a".

Page 4703, line 7, between "flowing" and "deposits" insert "water", and on line 8, strike out the word "was" and insert "and", and on the same line between the words "that" and "floated" insert the word "remained".

Page 4712, line 14, after the word "shale" insert the words "as some".

Page 4711, line [illegible], before the word "mountains" insert the words "rocks in the ".

Page 4722, line 7, after the word "and" insert the word "at", and after the word "may" insert the word "be".

Page 4726, line 17, after the word "you" and before the word "mean" insert the word "don't"

In answering that question I meant to say 'if you don't mean the word as an artificial duct"

Page [illegible], I simply wish to call Mr. Brist's attention to his question in line 8, if he wishes any correction to be made there.

Mr. Brist: It is obvious that the word "mean' should be inserted before "above".

~~[illegible]~~ Page 4730, line 4, change "artun" to "arroio".

4735, line 16, after the first word "that" insert "that, and after the word "canyon" insert the word "which". And on that page I wish to call attention to the fact that I misunderstood that portion of the question in line 16. The question refers to surface run-off and the answer was to sub-surface run-off. When I said "you can't measure that on the surface" I meant underflow or sub-surface run off.

Page 4749, line 8, strike out the words 'had been' and insert the word "were".

Page 4764, line 10, strike out the word "the" and insert "this" at the end of the line.

Page 4769, line [illegible], before the word "wells" insert the words "measurements of".

Page 4774, line 6, figures 1555.1 should be changed to 1551.1-- By the way, I see that that is in Mr. [illegible]'s

question. He repeats what is said above, but it is quoted wrongly.

Page [illegible], line 1[illegible], change "bould" to "bound".

Page 4796, line 1, after the word "[illegible]" insert the words "at page 341."

Page 4797, line 3, at the end of the line insert "I"; and on line 11 change the word "been" to "become".

Page 4806, line 14, change "you" to "to".

Q Have you examined the plat plaintiffs' exhibit [illegible]?

A I have.

Q State what in your opinion it shows with reference to the outlet of the waters from the gravel basin.

A Taking the figures which appear on that map only, and considering them in connection with the data given,-- for instance, that the figure experimental shaft no. 4, 1890, elevation of ground 1471, elevation of water 1410, and the elevation of the 16th street wells, and correcting that by the fall in the water plane which has occurred from '90 to these dates, as shown by the fall in well No. 2 of the San Antonio Water Company, that would show a rapid descent to the southeast to experimental shaft no. 1. [illegible], taking the figures at the Cucamonga shaft, shown in 1890, elevation of ground [illegible], elevation of water 1176.[illegible], show a very rapid descent -- more rapid than in any other direction from the 16th street wells -- and the location of the [illegible] shaft is such that there can be no dike north of it, because it is too far north and too near Base Line, and that

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shaft demonstrates merely that the dike had petered out there and is buried to a greater depth than the bottom of the shaft, and that there is a free movement in that direction unimpeded by any formation like the Red Hills. The high elevation of the 16th street wells above that point being due to the obstruction of the Red Hill which lies east of the Bourwine shaft, and extending northerly from that point.

Q Whereabouts is the Bourwine well? Can you mark it on exhibit F? Is it shown?

A I don't think it is shown. I see the word "Bourwine shaft" but I don't see any mark after it. That is further west than on exhibit 83. It is further east than that marked on Exhibit F. It is correctly shown on exhibit D, but I haven't got that here on the board. But it is not correctly represented on these two.

Q What is your opinion as to the descent of the waterplane there, as to its being so rapid -- what is your opinion as to whether so rapid a descent of the water plane as shown by the Bourwine well would be due to the fact that the water is taken at 16th street wells.

A My opinion is that it would be impossible.

Q Why not?

A Because the elevation at the 16th street wells is built up by the flood channels running near them during flood times, and also the northerly part of the Red Hills lying to the south of the 16th street wells, while the Bourwine shaft is further west and out of the influence of the Red Hills. That decline in the water plane is merely the accelerated movement from the 16th street wells in a southerly or slight-

ly west of a southerly direction.

Q What is your opinion with reference to the profile, Exhibit 34, as to its demonstrating anything with reference to the direction that the water plane falls?

A That does not demonstrate any more as to which way the water plane falls than a railroad grade across the country. Because if a railroad line has a fall from one place to another, that would be no basis to form an opinion as to which way the water flows. In order to form an opinion of the direction in which the water flows, whether on the surface or under the surface, contours must be laid off on a map. Profile lines cannot be drawn to exhibit that phenomenon. If on the surface the surface lines must show the surface contour, and the water will move at right angles to such contours. But if under the surface, the contours must show the contour of the water plane and the water will percolate at right angles to these contours.

Q What is your opinion as to the plat shown on defendants Exhibit ~~22~~ X 24, as demonstrating the effect of the diversion shown on that plat from the Cucamonga Springs and Y tunnel upon the Cucamonga Springs and Y tunnel?

A My opinion is that it merely shows that the Lone Star well No. 6 of the Cucamonga Water Company has contributed to the decline, and that the other records from the Lacy tunnel and the 16th street wells do not contribute, for the following reason: Beginning on the side of the diagram marked "February" with the vertical scale we find that there was gravity flow from the Cucamonga Springs of 10.51 inches and from the Y tunnel of 7.5 inches, about the first of

March, 1908, and that at that time the Eadie tunnel was discharging 104.62 inches. We find that the Eadie tunnel flow increased to about sometime about the 9th of March to 111.02 inches, and that during that time the Cucamonga Springs and Y tunnel were both rising. We also find that the Eadie tunnel flow decreased on the 19th of March, or the 21st of March to 106.54 inches; that there was still a uniform rise both in the Y tunnel and Cucamonga Springs. And then we find a sudden increase in the Eadie tunnel flow about the 29th of March, at which time it was flowing 192.19 inches, the bulkhead having been in the mean time opened, and that still there was no decline in the Cucamonga Springs or Y tunnel, but a rise in the Cucamonga Springs, as well as the Y tunnel, in spite of that increase from the Eadie tunnel of something like 88 inches of water. Then we go on and find that on the 7th of May the Cucamonga Water Company began pumping its lone star well number 6, and from that time there was a decrease in the Y tunnel, and the Cucamonga Springs just held their own. Then we find that the pumping of the Cucamonga Water Company dropped on the 27th of May- so it was only 37.41 inches - and that as soon as that occurred the decline in the Y tunnel was temporarily arrested, and the line is level, practically; and from that point we find the Cucamonga Water Company gradually increases its pumping, as shown by the gradually ascending line to the Lone Star well, and in that ratio the Cucamonga Springs and Y tunnel continued to decline to such an extent that about the 14th of August, 1908, the pumping line from well number 6 crossed the flow of the Cucamonga Springs, as shown

on this exhibit, and from that point on the pumping increased slightly and the decline in the Cucamonga Springs corresponding with it. Now, as to the pumping of the San Antonio Water Company having any effect, which is platted above, we see that there was no more rapid decline in the Y tunnel or Cucamonga Springs as that pumping varied than there was before, and that the increase of that pumping from time to time or its decrease does not affect the curves below in the least. If we should assume that the three causes, the Hady tunnel, the pumping of the 16th street wells, and the pumping of the Lone Star, all contributed alike, and would take the ratio which the Cucamonga Springs and Y tunnel declined in, before the San Antonio Water Company's pumping began, the effect would have been so great as to have obliterated the Cucamonga Springs and Y tunnel almost immediately. Because on the 19th of July the San Antonio Water Company were pumping 219 inches and the Hady tunnel was discharging 298 inches, 517 inches of water altogether,- while the same decline was proceeding at the same rate before the pumping began, and the total decline of the Y tunnel had only been about 13 inches, which corresponded to the effect of the Cucamonga Water Company's pumping; and if we apply the same proportion to this enormous quantity of water drawn, it is evident from this diagram that the small flows down there would at once have been extinguished.

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Q. Referring to the tabulation at page 5227 of the record "Table showing waterplane at Hellman Well No.2 (west end T tunnel), Cucamonga Water Co.'s Well No.6 (west end Lone Star Tunnel No.1), Well L, and Sunset Water Co.'s well 1, as affected by pumping of wells and bulkheading Eady and Lone Star tunnels," at pages 5227, 5228, 5229 and 5230 of the transcript, will you state what in your opinion that tabulation indicates with reference to the effect of the pumping of the wells of the San Antonio Water Company and the bulkheading of the Eady tunnel and Lone Star tunnel? And give your reasons for your opinion.

A. That table does not show any different water plane in the Lone Star tunnel or in the Hellman well No.2, or any effect of any other wells on Hellman well No.2, except the pumping of the Cucamonga Water Company, and the natural decline which occurs in various seasons. In the column under date of February 4th, 1900, under the column "Depth water Lone Star tunnel", that column starts out with zero; but on that date the Lone Star tunnel had not been driven to well No. 6; and there is a measurement in the record in the reporter's transcript in this case, which on the date, February 4th, 1900, gives the elevation of well No. 5 as 1330.3 ft above sea level, only two feet hi lower than well No.6 of the Cucamonga water Company on the same date. I will state that that measurement gives the depth to water in well L, on page 5593 of the reporter's transcript.

Q. That well referred to as L, is the same as No. 5?

A. Well L is marked on Defendants' Exhibit L.

Q. Well L is called 5 now?

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A Yes, sir; Well 1 is shown on defendants' exhibit L, and is the same as well 5 of the Cucamonga Water Company, and the depth to water given on the 4th of February, 1900, at this page of the transcript if subtracted from the elevation of the well, as shown on exhibit L, gives the elevation of water in that well as 1590.3 feet. If that is added to this diagram, the conditions shown will be very different, because then Lone Star well 6 would be only two feet higher than well No. 5, and would show they were in the same waterplane; and at that time the transcript also gives the elevations of wells E, F, G, H and I, as shown on plaintiffs' Exhibit 1, at pages 3092 and 3095, by giving the depth to water; and by subtracting the depthss from the elevations given on the surface on plaintiffs' Exhibit 1, it is found that at that time all of the wells on the 35-acre tract stood at a very high level, and not a zero level, as assumed by this tabulation, and that they were all in the water plane; and as a fact, these wells, E to I, in the year 1899, were all flowing wells, before the artificial condition induced by the tunnel known as the lower Lone Star tunnel was brought about; and the reasoning of Mr. Wright, while it states the facts at the present time correctly in this table, is based on the assumption that that condition always prevails, which is shown not to be a fact; that in 1900 the condition was present, that the waterplane in that well was up to the waterplane in well No.6 and Hellman well No.2; and therefore I say this table shows the contrary to what it purports to show.

Q Mr. Wright day before yesterday gave some testimony on

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page 5312 of the transcript with regard to the fall of the Kellman well, beginning with January and during the year 1905: State what is your opinion with reference to the effect shown by these figures? That is a statement on page 5312.

A I don't know as I have that before me.

Q Well, we will pass that then.

A I don't remember what it was.

Q Well, I think that is covered by the original testimony any how.

Q There is testimony here of Mr. Wright with regard to a drop of eight feet, being caused by some sort of a break or something of that sort in the casing of Kellman Well No.2: State whether any break in the casing could affect the elevation of water in the well.

Mr. Brist: That is objected to; that was thoroughly gone into in the earlier parts of the case; it has been referred to by Mr. Wright here only incidentally in referring to explanations that had been given by other witnesses in the early history of the case.

Mr. McKinley: That question is withdrawn.

Q Referring to the tabulation on page 5213, 5214 and 5215, 5216 and 5217 of the transcript, purporting to show the sympathy of San Antonio wells Nos 4, 5, 6, and 7 and Kellman well No.2 (at west end of tunnel); also the effects on wells when bulkhead in [illegible] tunnel is closed, - state what your opinion with regard to that subject is, as shown by an examination of that table.

A Beginning with the first data given on that table on page

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5213,- and I will state in giving these figures, I shall exclude San Antonio Well number 6, because that was pumped irregularly to irrigate the Rubio orchard, and you can't draw any conclusion from that, and no point is made on it, and we never considered it of any importance, and I will confine my analysis to other wells for that reason. Taking the first two dates of May 12th and May 19th, this tabulation shows that San Antonio well number 4, stood on the same level on both dates; and at San Antonio well number 7 there was a decline of .4 of a foot between the two dates. Hellman well number 2 rose .1 of a foot, so the table starts out showing a lack of sympathy between those wells; one stood the same and one declined .4 of a foot, and the other rose .1 of a foot. then if you pass down to the dates of May 26 and June 2, you find that there was a rise between those two dates, of 3.5 feet in San Antonio well number 4, and a decline of .5 of a foot in San Antonio well number 7; and a decline of .4 of a foot in Hellman well number 2, which again shows lack of sympathy, as well number 4 rose three and a half feet, while the other two declined, but not by the same amount. If we pass down to the dates between June 11 and June 18, we find that the decline of number 4 was only 1.1 feet, and in well number 7 it was .3 , and Hellman well number 2 it was.4 of a foot, again showing a departure from any law of relation among those wells. And while there are some cases during that year 1904, in which you can show a similar decline in those wells, they are so few that they are mere coincidences, and the majority of the cases are such as indicate a contrary opinion.

Q State whether you find that condition existing as to subsequent measurements and subsequent years?

A I might go through this table in extenso for 1905 and other years, and show the same thing and greater variations; I simply give those in 1904 as illustrations of the fact.

Q Referring to the tabulation at page 5221, purporting to show the effect of bulkheading the tunnel by the elevations of the waterplane at San Antonio Water Company's well number 5, and Hellman well number 2, what is your opinion as to that being shown, and the reasons for your opinion?

A The table on page 5221 starts out with 1905, Januaryx 11th; from that date to February 4th there was a rise of 4 feet in well number 5, while in Hellman well number 2 there was a rise of 3.3 feet, showing a greater rise in well 5 than in Hellman well number 2; passing to the next two dates, from February 4th to April 3rd, the rise in well number 5 was 4.2 feet, while in Hellman well number 2 the rise was 4.4 feet, showing a reversal of the conditions of the two previous dates, or a greater rise in Hellman well number 2, than in the San Antonio well. Then if we go down where the bulkheading of the tunnel becomes a factor, and we take the dates in 1907, from February 2 to May 6th, take the period between those dates, there has been a rise of water back of the bulkhead, as shown in the last column for well 14, of 16½ feet, in which time the level of well number 5 has changed 8.1 feet, risen that much, that is risen at that much greater rate during the second part of that than the early part. Now, if we take the time from the Second of March to the 11th of July, we find that there is between those two dates, a differ-

ence of 19 feet between the two levels in the tunnel, and while we find that the difference in raise of well number 5 has been very different if all the measurements are considered from beginning to end - -

Mr Britt: We object to the drawing of conclusions from measurements in general, and going back to the original case.

The Court: ,Objection sustained.

Q Do you find other illustrations of the matters that you have mentioned, running on through the table?

A I do.

Q Well, we will pass now to the next table: Referring to the tabulation at page 5289, you may state whether there is anything in those tabulations, in your opinion, modifying your views, with regard to the effect of the Eadie tunnel, or any of the wells or tunnels of the San Antonio Water Company on the Cucamonga Springs?

A No, sir; I think that table, - assuming the figures in the last column, as the total of the east side to be correct - I haven't had time to verify those figures by calculations,- I am assuming they are correct,- and assuming they are all correct, they strengthen my opinion very materially as to the fact that there has been no interference with the east side by any developments on 16th street by the San Antonio Water Company, or by the Eadie tunnel; and if you wish my reasons,- -

Q Yes, go ahead and give them briefly.

A Beginning with this table on page 5289, with the year 1885, which followed a very wet year,- the wttest year we have had in California, since any records have been kept,-

the effect of that year gradually became felt, until its culmination finally was apparent six years later, in 1890, when the largest flow on the east side is shown.

Mr Britt: Objected to as not in rebuttal; the effect of the years from 1884 to 1890 are matters which were gone into extensively in the case of the defendants in chief.

The Court: I think the witness should be confined to this particular tabulation.

Mr McKinley: Yes, I think that is correct, under Your Honor's former ruling. Exception.

Mr Britt: We have no objection to their being rebutted but not by matter already in the case.

A Referring to the tabulation at page 5289, and beginning with the year 1890, and proceeding to the year 1900, when the pumping began extensively, the decline has been 322.23 inches on the east side supplies; and if that decline had continued it would have made the figures at the end of this table much less than they are; and the year 1900, which witnessed the beginning of the extensive pumping operations, there was an increase on the east side up to 1901, which however, was undoubtedly due to overdraft; then the decline continued, from the dry years, up to 1905, which was the lowest output shown in this table, and from 1905 up to 1908 the increase has been about 66 and a fraction inches, in annual inches, in the output of the east side, showing the effect of the better years, although not fully realized, is rapidly restoring the conditions, and this table really demonstrates conclusively, that, so far as my opinion goes, that the pumping has not affected it, since the decline has been less rapid; in fact

there has been a recovery since the pumping commenced, while before it was a constant decline from 1890 to 1900.

Q What is your opinion with reference to the matters shown by the tabulations of Mr Cousins, shown on pages 4893 and 4897 of the transcript, taking them separately or together, either way?

A First referring to the table on page 4893, I detect what is a mistake in calculation on the part of Mr Cousins, which I wish to call attention to before discussing that table: taking the column under Cucamonga Water Company number 6, under dateof March 14, 1909, there is given in feet minus 5.57, which according to the table would indicate that that well was standing 5.57 feet lower than Hellman well number 2. Now, by referring to Mr Cousin's table, on page [illegible] of the reporter's transcript, we find that on March 14, 1909, the Cucamonga Water Company's well number 6, was standing 1369.02 feet high, and that on the same date the west Hellman well was standing at 1363.45 and subtracting these two we find that the Cucamonga Water Company well number 6 on that date was standing 5.57 feet higher than the West Hellman well, instead of 5.57 feet lower. This correction changes the entire effect of the table,because it shows after it is made, that so far as Cucamonga well number 6 is concerned, it shows every time that well was lower than the Y tunnel or west Hellman well, there was no flow of the Y tunnel well, and every date there was a flow from the Y tunnel well as shown by the table, the Cucamonga well 6 was always higher than the Y tunnel, which would seem to demonstrate that is what accounted for the flow in the Y tunnel; while at the same time there

was no time shown in this table on page 4893, when San Antonio well 5 or 7, was ever lower than the West Hellman well, and that the 1 tunnel was dry; I would say as a deduction from that table that if the San Antonio wells were the ones which supplied the 1 tunnel or West Hellman well, as long as they stood higher there should be some flow there; whereas if the Cucamonga well were the one, there should be the same relation; and we find that corresponds with the Cucamonga well all the way through, and not with the San Antonio wells.

Now, taking the other table of Mr Cousins on page 4897, we find that in the last column, which is the only complete comparison, as that applies to all the wells in his table, as the first three columns are fragmentary, consisting of one series of wells in each column, if the take the last column of the raise of the wells from April 8, 1908, to April 10, 1909, which is two days over one year, we find in San Antonio well number 5, there was a raise of 2.1 feet; in San Antonio well number 7, 1.5 feet; and in San Antonio well number 14, as per plaintiff's Exhibit 1, there was a raise of 7.3 feet, that being the raise in the Sadie tunnel; while if we turn to the wells on the east side of the Red hill, we find the Cucamonga well number 6, raised 3.[illegible] feet, and the Lone Star tunnel water level raised 18.9 feet, and the Sunset number 1 raised 5.8 feet, and the Old Settlers' well 6.76 feet. Now, taking the two groups and comparing them, the very much greater rise in the east side wells during the past year is a very important factor in demonstrating the lack of sympathy between the east side on the one hand, and the west side and the 16th street wells on the other hand.

The raise in the east side wells has been tween the limit of two to four times as much in the different wells during that year, as in the west side, showing that different conditions, and different periods of replenishment from natural rainfall at different periods of time, govern the two formations.

Cross Examination.

Mr Britt, Q You said that the wells on the 55-acre tract were artesian flowing wells in 1899?

A It was either 1898 or 1899 that I saw some wells flowing there; I wouldn't be positive of the year; it was before the tunnel was driven in and they were pumping.

Q Isn't it a fact they were pumping then, and not flowing wells?

A No, I didn't see those wells pumping extensively until - well, I think they were in the latter part of 1899, and they were pumped in 1900; that I testified to already; but in 1898 I never saw those wells pumped, but I saw them flowing; it might have been in the early part of 1899 that I saw them flowing; I don't want to be understood as saying that all of them flowed; I have seen flowing wells on the 55 acre tract, discharging on the surface.

-o-

Mr McKinley: Defendants rest other than a little matter of stipulation with Mr Stevens.

-o-

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E. T. WRIGHT.

E. T. Wright, previously sworn, recalled for correction of testimony, and for plaintiffs in rebuttal, testified as follows:

WITNESS: There are a few corrections I desire to make in my testimony:

On page 5159, before the first line at the top of the page insert "Lone Star well number 6".

On page 5179, line two should read " But how much higher than Base Line, I don't know."

Line 21 of the same page change the word "all" to "some".

Page 5182, line 9, it should read "affected those springs" instead of "dried up those springs".

Page 5191, line 27, it should read the years 1904, 5 and 6, instead of 1894, 5 and 6.

Page 5208 in the Cucamonga Water Company average the figure should be changed from "81" to "91".

Page 5253, line 19, should read 18 inches, insteadof 3 or 4 inches.

Page 5255 line 13, should be "1900" instead of "1902.

Page 5280, line 26, insert "not " between "is" and "the".

Page 5284, line 24, the year 1909 should be 1900.

Page 5348, line 8, insert the word "not" between "would" and flow".

Mr Britt, Q Do you know the group of wells on the 35 acre tract?

A Yes, sir.

Q Are you well acquainted with them?

A I probably was there a dozen times in 1899, the year they

were being bored, and more times in 1900 and afterwards.

Q In 1899 or 1900, or at any time were those wells flowing wells?

A I never saw them flowing; I never saw water flowing on the surface or as high as the surface.

Q If they had been flowing wells would you have observed it?

A I certainly think I should; I never knew one to flow.

Q Or in 1898?

A Oh, they were bored in 1899; I don't think they were bored any of them, before that.

Q Do you know at what depth they stood below the surface in 1900?

A I probably know more from Mr Finkle's own testimony more than anything else; that is in evidence now.

Cross Examination.

Mr McKinley, Q Do you know at what elevation they stood or how far below the surface they stood when they were first struck?

A All the way from ten to thirty feet below the surface; it is a sag, practically, down there.

Q Are you sure that none of them ever reached the surface?

A I am as sure of that as mortal could be, that I never saw one reach the surface, and I kept watch on them.

Q Did you supervise the putting of them down?

A No; Stowell had that; I was there a great many times running the lines, and giving him the course; I was there quite often.

Q It is possible that one of them flowed without your seeing it isn't it?

A Not probable.

Q Well, it is possible, isn't it?

A Well, I wouldn't think so.

-0-

Mr Britt: I suppose it will be agreed that any papers of exhibits which have been offered in evidence, and have not been read at length, may be considered as read.

Mr McKinley: Yes; we had already agreed to that.

The Court: It is so understood.

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Plaintiffs rest.

Intervenors rest.

Defendants rest.

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